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PENNSYLVANIA

FARM JOURNAL,

DEVOTED TO

Agriculture, Horticulture & Rural Economy.

S. S. HALDEMAN, EDITOR.

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FARM JOURNAL

VOL. 1.

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NO. 1.

THE FARM JOURNAL.

S. S. HALDEMAN, Editor.

Editor's Address.

"It is a great fallacy to suppose that when an individual becomes the editor of an Agricultural paper, he necessarily constitutes himself a dictator of opinion and practice to his readers."—*Tennessee Farmer*.

No apology is necessary in offering a new periodical devoted to the subject of Agriculture and the collateral Arts and Sciences, to the farmers of Pennsylvania and the neighboring States, as well as to others who desire to know the condition, and become acquainted with the prospects of the most useful and extensive branch of American employment.

The formation of societies and the publication of journals devoted to Agriculture tend to impress the farmer with the dignity and importance of his profession, and places its claims to respect prominently before the world at large. But whilst there are periodicals devoted to the interests of the merchant, the mechanic, the politician, and in fact to the chief pursuits and tastes of civilized society, the cultivators of the soil have generally been among the last to be supplied with this kind of mental food; and were it not that they have shown themselves ready to adopt improvements as they become acquainted with them (the early introduction of thrashing machines, improved plows, and other implements being proof of the fact) the condition of American agriculture would not have occupied its present favorable position in comparison with other branches of industry.

From their generally isolated position, farmers have but few opportunities of consulting together, and making themselves acquainted with the various modes of culture employed in distant regions, whilst the results of individual experience are confined to limited districts. One farmer may think of adopting a rotation of crops differing from that to which he has been accustomed, but fears that the result may be unfavorable, although the experiment may have been successful, or may have failed, in a different part of the country.

Under these circumstances, an Agricultural Journal takes it stand between the person who wishes information, and the one who is capable of supplying it; and it becomes a bond of union and sympathy, forming a partial recompense for the want of the active intercourse which exists among those engaged in mechanical pursuits. This end is accomplished to a great extent by the formation of Agricultural Societies, but it frequently happens that the farmer cannot leave his home at the periods when these meet, whilst the Journal makes its regular visits to his own door.

We expect to devote considerable space to *Correspondence*, and we invite communications upon field, garden, and orchard culture, and their collateral branches.

As soon as the necessary arrangements can be made, we intend to import the best *German, French and English Periodicals* devoted to farming, that our readers may become acquainted with the latest agricultural improvements abroad. Particular attention will be paid to the *Review of new Books* which have a bearing upon the subjects to which the Farm Journal is devoted.

There existed formerly certain prejudices against "book" farming, but as modern agricultural literature embodies the observations and practical experience of the best farmers, such objections are now untenable. Judge J. Buel, (who was lost to his country in 1839,) did much to advance agriculture by making it a matter of the head, as well as of the hand; and his success was such, that besides giving an impulse to farming which was felt throughout the Union, he increased the value of his own light and sandy farm, "which cost in an uncultivated state, thirty dollars an acre," so as to be worth "two hundred dollars an acre for farming purposes."

In addition to the practical results, the employment of the reasoning powers in agriculture elevates it to the dignity of a science. It refines the mind of the cultivator, perfects his education, places him on an equal footing with the professional man, and presents to his offspring a wide range in the fields of ge

ology, botany, chemistry, and the collateral sciences; so that a practical home education may to a certain extent supersede one acquired abroad, and afford his sons a sufficient scope for the employment of the intellect, without forcing them into the uncertain fields of professional or commercial life.

To Correspondents.

Verbal alterations and corrections will be made in printing communications, unless their authors desire them to appear as written, and they will be occasionally condensed when it can be done without altering the sense.

One of our correspondents will observe that we have omitted an article in which he enters upon the questions discussed by our friends Skinner and Carey.—We have done so because we do not wish to encroach upon the special ground of "The Plough, the Loom and the Anvil," and because we are not disposed to admit theoretical articles upon political questions which are ably discussed upon both sides by the Whig and Democratic papers. The Farm Journal is intended for readers of all political parties, without being an advocate of the peculiar views of any.

As a general rule we prefer that contributors would allow their name and place of residence to accompany their articles. When modes of culture are detailed, the nature of the soil should be stated.

H. M. Paine's Light.

This "light" seems to have been named in accordance with an etymology formerly given, which derived the latin word LUCUS a *grove* from LUCEO to *give light*, because groves are usually *dark*. All who have pretended to explain the new light have left some point in darkness, so that the public know as little about the matter as they did before the fourth of July, 1850, when the whole world was to have an ocular demonstration of the discovery.

According to the Paine assertion, water is not composed of oxygen and hydrogen, but is a simple element which he can convert into the *condition of oxygen or hydrogen* at pleasure.

A person named G. Q. Colton, who claims eight years of chemical experience, gives an explanation and figure of the apparatus used, under date of January 2d, 1851. Among other things he tasted the water in the jar, to satisfy himself "that it *was* water." But a chemist of eight years standing should have tasted the water in the 'bell-glass,' and above all, that in the 'tumbler,' as the former may have been acidulated, and the latter may have contained some substance intended to take up the oxygen through the 'positive' wire, which may have been hollow, although stated to be flat. A chemist would not have allowed the "electrode box" to pass without examination, and he might have examined it when he tasted the water in the

jar. He does not inform us why the jar did not burst with the pressure of the gas before the stopper was removed to let out the atmospheric air; nor why the mouth of the outer jar must be closed; and being closed, how he procured the water which he drank.

The great power of the machine is said to depend upon the wire of the coils being tubular, and containing half a pint of water, which increases the power 10,000 times. The following assertion is cautiously made with regard to Faraday:—"I think, he says, that a single drop of water will contain as much electricity as a thunder cloud—sufficient to burst off the gable end of a house." Some of the newspapers in commenting upon this article have fallen into the trap, and take it for granted that Faraday did make such an assertion. He may have asserted that it requires a great power to *separate* water into its constituents, which does not help Mr. Paine's theory; and were the machine made as stated, the water would actually *diminish* the effect rather than increase it.

If one drop of the water in the wire has power to burst out one wall of a house, four drops would destroy the house, and four thousand would destroy a town of a thousand houses, so that forts, armies and ships could be destroyed, rocks blasted, and mountains leveled. Evil disposed people would have little engines made of three or four drop power to destroy property, and burglars would have smaller ones, of one-twentieth of a drop power, and as large as a toothpick, but strong enough to force doors and iron safes. These should not be encumbered with the jars and water, because the latter are really not essential to the production of power and light by the electro-magnetic machine.

The Paine light was flickering upon a sickly reputation, when a new act of the plot appeared in the shape of a letter (in the Boston Transcript of Jan'y 30) from one Geo. P. Paine, detailing some difficulties in the management of this half a pint of condensed thunder, owing to the occurrence of "nine severe explosions in as many months," none of which however, "burst out the gable end" of the house, although in one case the hydrogen in the decomposing jar is stated to have exploded with a report like that of a six pounder. The final explosion will probably be so gradual that no one will be disturbed by it except the stockholders.

Obituary.

We regret that we have to announce the death of the distinguished and energetic editor, JOHN S. SKINNER, who has been identified during a great part of a long and useful life, with the agricultural improvement of the country, first in connexion with the *American Farmer*, and at the time of his death with *The Plough, the Loom and the Anvil*. He was at one time Postmaster of Baltimore; and previous to commen-

ing his last periodical he occupied a prominent place in the General Post-office at Washington. He lost his life on the 21st March, by falling through a cellar door at the Baltimore Post-office, striking his head against a marble sill, which deprived him of speech until he expired.

The Hon. ISAAC HILL, formerly Governor of New Hampshire, United States Senator, and for many years an editor, died recently at Washington. At one period he edited an agricultural periodical.

The Rev. SAMUEL FARMER JARVIS, D. D., a clergyman of the Episcopal Church, died recently at Middletown, Ct. He was a member of various learned societies, and President of the Natural History Society of Hartford, in whose transactions for 1836, a valuable address of his on natural history may be found.

Virginia.

This State has recently taken a step far in advance of its neighbors, by providing for an agricultural chemist.

Communications.

Hints to Agricultural Writers.

In the establishment of an Agricultural Journal, you have entered upon a field where your labour may be turned to a most profitable account. We do not derogate from the character of the farmer, when we assert that they have much to learn of the business in which they are engaged. Agriculture as a Science, to understand it thoroughly, calls into requisition a most extended circle of knowledge, and demands an expanded degree of thought and study, which is incompatible with the every-day avocations of a farmer. His opportunities and mode of life, forbid the application of his time to such pursuits: he must deal with practical results attained by others, whose better opportunities have enabled them to prosecute the study of scientific knowledge, and reduce its elements to practical conclusions. This view of the subject seems to point out to you the plan upon which an Agricultural Journal should be conducted. To render it valuable it should treat of subjects, and be couched in such language as will be easily understood by that class of readers whom you hope to benefit by your labours. When we reflect that every operation on the farm is based upon some substantial reason; that every implement used is formed upon certain fixed mechanical principles, and how little either enters into the consideration of the operator, how delightful a task it is to treat of such subjects, and communicate to the farmer in a plain and intelligible phraseology the reasons for the work in which he is engaged, or the principles upon which his implements should be constructed. He knows from experience that certain causes produce certain results, but how few know why such results are produced, although the reason for each may be a plain simple truth, a result of scientific knowledge, easily communicated and as easily understood. We can not better illustrate our views than by referring to certain examples. The experience of every farmer has taught him that to plough land when wet is exceedingly injurious to it; but has the circumstance itself caused him to inquire why it is so? Is it too simple a truth to teach that the cultivated earth has a capacity to feed upon

that nourishment with which it is constantly supplied by the natural elements:—that light and heat are as essential to its capacity for production as they are to the vitality of the animal body: and that the effect of ploughing land when it is wet, is to shut up those mouths and lungs, and make it impervious to light heat and nourishment, and for the want of them it dies? This idea would give to many farmers a subject for thought, and induce them to carry their reflections into the whole subject of ploughing, and while actually engaged in the work, the naturally vigorous mind would expand into the inquiry how it may always be done well. Knowing then, that the object of ploughing is to put the ground in that loose pliable condition, in which it will the more readily receive all these advantages which it naturally requires, he will take another step, and inquire into the character of the plough he uses. Does it make that miscalled *beautiful* work, where the ploughed ground is turned over as hard as a pressed brick, over which you may walk without making a foot print, or does it leave it in the condition which we have before described, ready to receive the nourishment which so increases its capacity for production.

This is but one of the thousand plain suggestions which may be offered to the intelligent mind of the farmer, calculated to produce thought, excite an interest in the business in which he is engaged, and ultimately produce new and practical results.

Whilst we would not exclude entirely from the columns of your journal, the description of learned theories which pertain to agriculture as a Science, yet its editor should never be unmindful how comparatively few of his patrons will either read or understand that which is expressed in a phraseology as unintelligible as if it were Greek.

It will be your province, too, to instill into the minds of farmers a high toned feeling of self respect: that their occupation may not fall below the rest of mankind, in taking rank in that laudably ambitious context, which, in this age, seems to urge the world forward in the race of improvement. Their condition is an isolated one, and they have a corresponding difference, which restrains them in their intercourse with their fellow men, whilst there is in their occupation a subject of thought; an intermingling of the order and beauties of nature, and an indispensable importance in its object design and results, which claim for it that high degree of respect which is always awarded to a well instructed mind.

Upon the character of your Journal will depend its usefulness, and its success will be measured by the impression it will make in this particular.

Carlisle Pa.

FREDERICK WATTS.

On Agricultural Journals.

Notwithstanding the great press of private engagements, which at the present claim my utmost exertions, and which, like my daily bread, can neither be postponed nor remitted; yet such are my sympathies, that I cannot refuse lending you a helping hand, though the extra job should prove never so hard or jading.

You tell me you are about publishing an Agricultural Journal, and are pleased to think that a few lines from under my hand, might prove serviceable to the undertaking.—Thanking you for the compliment, it becomes me to say however, that my compliance with your request is superinduced by a better feeling than that which moved the crow in the fable, who, on being praised for a fine voice, rendered herself ridiculous by attempting to sing—a feeling, that never fails to move me, however indifferently gifted, and

that is, a desire so pervading, or so inherent, if you will, that I am ever ready to contribute my mite towards promoting agriculture in any quarter, but more particularly in Pennsylvania. Well, then, to begin: I shall say a few words on the expediency of farmers encouraging Agricultural Papers for their own sakes at least, to say nothing of the propriety of patronising such works for the credit of their good old Commonwealth, which should never be permitted to lag behind any other state, in any thing commendable.

It will be admitted that no man claiming to belong to a party, or fraternity, can maintain its principles, understand its policy, know its strength or condition fully, without commingling with his fellow-members, participating in their meetings, or being periodically advised of their practice and progress. If this be so in the general, with what force must the necessity of a compliance with one of those means of enlightenment and intercommunication, particularly appeal to the common sense of every farmer, who from his isolate position is debarred in a great measure from mixing with the world, and of the chance of being carried along with it in its improving progress. A Paper then is, of all things, the most available channel, through which he can learn what is going on in the way of improvements, in the line of farming. How indispensable to him, who is toiling week after week, apart from the stirring world, except when he is at the Mill, the Blacksmith's Shop or the Wheelwright's, to receive a monthly Journal, devoted to the advancement of the very art, by which he earns a livelihood. An Agricultural Paper which enables him to know the condition of the seedling, and harvesting and cropping at distant places, thereby affording a glimpse at the prices that will rule in grain, corn, &c., in advance—that will tell him of experiments and results in the matter of Rust, Potato-rot, Smut and various other things, as disease in cattle and other stock; pests in various shapes, which he fain would know, and should know—of improved tillage, cheap drainage, profitable breeds of cattle, sheep and hogs, and economical feeding of them that will inform him of the proceedings of Agricultural Societies, the display and addresses at Agricultural Exhibitions; in short, such information touching the whole routine, practice and theory of tillage and husbandry—the weal and wo of that class of society, in whose character and career, the destiny of himself and family is unquestionably involved. Where is the farmer, who will allow himself to think upon the subject, would be without such a paper, when it costs but the pitiful sum of, ONE DOLLAR PER YEAR!

The expediency, nay the necessity, of an Agricultural Journal being read at every farmer's fireside is so apparent, that it would seem a waste of time to demonstrate a proposition, which all must admit, and none could, if they would, deny or contravert. Well, then, what must we think of the fatuity, the insensibility, that prevails among the farmers of Pennsylvania when it may be safely stated, that seven-eighths of them do not subscribe for, or read an Agricultural Paper. How mortifying to think of such a condition of things; and to point to the fate of the "Farmer's Cabinet," an Agricultural Paper, published for several years in Philadelphia, and which, after a hard struggle for existence, perished for lack of patronage. Its remains were sold to a Publisher in New York, a State, which supports three or four Agricultural Journals creditably. If this is not sufficient to lower the brow of every intelligent, right minded farmer, in what is called, "the Key stone State," I should be at a loss to know what could cause his eye to flash or his brow to droop.

Permit me to ask, my brother farmers, if houses are built as some fifty years ago they were? Is their erection such an interminable job now as it formerly was? Do carpenters work with the same clumsy tools as then? Are brick made and burned as in days of yore? Is tanning so slow a process as it used to be? Is the smelting and forging of Iron better understood; and how is it with the whole range of manufactures and machinery? All changed, and for the better. Well, how is it with farming? Pretty much as it was in the days of our great-grand-fathers, a century ago. Wherein is the cause of this difference? Why, while the farmer reads nothing to enlighten him on the practice of his calling, nor joins a society for the improvement of himself and others of the same profession, believing that his art is not susceptible of improvement; the Mechanic, Manufacturer and Machinist devour every thing that emanates from their Institutes, attach themselves to Societies peculiar to their craft, hold exhibitions, try to out-rival each other in experiment and skill, and hence the rapid and astonishing improvement to be seen in the practice of every industrial pursuit but farming, and that is at so dead a halt that neither drum, fife nor trumpet can throw it into a "forward, march!"—Every thing is going ahead but farming. Such is the spirit of progress, that it is no uncommon thing now-a-days, to find some son of the thimble staring it among his brethren of the shears, clipping a little of their superfluous cabbage, in the shape of admission to a lecture on the philosophy of coat-cutting, according to the science of anatomy. All trades and professions are under whip and spur on the road of progress, except farming, and that is so immovable, that it can scarcely lift its head to look over the fence, to see the race.

To what cause can this indifference, this "mildew of the mind" be traced? Some say the cold neglect of the Legislature, who has never directed an encouraging glance, nor bestowed a gracious smile upon the toiling tillers of the soil. Others will have it, that it is in the nature of farming to make dull and apathetic, and that nothing can be done for those who will do nothing for themselves—and so we might have as many opinions upon this matter, as persons could be found to put the question to; and differing as widely too, as would the doctors, should the cause of love or madness be submitted to them; and therefore it is unprofitable to seek for the cause any farther. It will be much wiser to direct our attention to the means best calculated to infuse life and energy into the torpid limbs of this unwieldy body, and set it agoing; and I know of no one agent fitter for the occasion than a spirited, well conducted Agricultural Journal, such as you mean to publish, which, if taken by any considerable portion of the farmers of Pennsylvania, it will be among them as the leaven, that leaventh the whole lump.

A close observation for many years satisfies me that an Agricultural paper is essential to the wants and requirements of the well disposed farmer. I have yet to meet the subscriber to any one of them, who did not acknowledge his indebtedness in some shape or other to its instructive pages. Show me the Agriculturist who is a constant reader of these periodicals, and I will show you a Husbandman that is far in advance of him who never reads any, unless his judgment is iniquitously perverted, or his mind radically defective. I know the favorable influence they exercised on my farming operations. Experience has long since convinced me of their utility, and I feel warranted in commanding them strongly to others. For years I have taken some four or five of these leading

Journals regularly, and am free to confess that though this subscription might be deemed liberal on my part, that even in the matter of dollars and cents, reckoning what paid, and what saved and made through them, I am largely their debtor. But this was not all the pecuniary value was of little moment to me, compared with the gratification in times past, from an occasional interchange of thought and sentiment with such editors as the Tuckers, the Allens, the Pedders, the Tatems, the Sands the Batemans &c—the glowing remembrance of that glorious past, serves now but to throw a deeper shade over the position in which one unguarded step, though well intended, placed my beautiful farm, splendid cattle, with every thing connected with a scene and system of farming, that were the theme of every observer—a change so mortifying and so discouraging as that I was made to feel, could not fail to damp my zeal and drive me from the field where I had long so bravely struggled with others, besides those already mentioned, to establish a lofty and commanding character for the agriculture of the country. This digression may easily be overlooked, for it is natural for one who finds himself upon a path he had not trodden for a long time, though once his accustomed walk, to stop or turn aside to recognise some tree, or plant, or flower that formerly had been familiar to him. So with me after so long an interval of silence, finding myself engaged in penning these hasty lines for the Agricultural press, I could not refrain from indulging a reminiscence forced upon me by the occasion.

It has been stated that I was the gainer by subscribing to agricultural papers. In proof of this I shall instance one item in the shape of a remedy for Hove in cattle, which I learned from one of these Journals, and which saved me the lives of two or more valuable cattle worth some hundreds of dollars. *hove* is produced by rapid or ravenous eating of rank young clover, green corn &c,—and occasions the death of numerous cattle yearly. The usual remedies are the barbarous practice of stabbing, and drenching with deleterious drugs; both of which are nearly as dangerous as the disorder. The simple and most efficient remedy is this, so soon as the animal is discovered to be unusually distended or hoven, let a twisted straw or hay rope as thick as a man's wrist be immediately placed in its mouth, bridle fashion, drawing it up tight, and tying it securely on the back of the head behind the roots of the horns. The animal's jaws will then stand open as if gagged; the effort it makes to disengage itself of the rope with its tongue, produces an action in the muscles that relaxes the valves, as it were, and liberates the gas. The cure is thus accomplished instanter, and without injury to the animal. As time is every thing in this matter, farmers should have the rope always ready made, hanging in the stable, and if the middle of it, (the part to be in the mouth of the animal) be besmeared with tar it would be more efficacious, but tar or no tar, the cure is certain, if the rope is applied while there is yet any energy remaining in the hoven beast. Now is not this worth a year's subscription of your paper to every farmer who has never heard of the remedy before.

If I am not mistaken in the signs, I think the present time is favorable for commencing an Agricultural Journal. Many of late have inquired of me whether there was any likelihood of one being started soon, and suggesting various plans and places appropriate to its issue; add to this the feeling manifested at the Farmers' convention lately held at Harrisburg, which if not permitted to subside, may work wonders for Pennsylvania. I trust the officers and members of

the State Society will consider it not only their duty to subscribe for your paper themselves, but to elicit subscriptions for you in their respective neighborhoods. In no way else can they, at this juncture, subserve the cause so well, as in promoting the circulation of a good Agricultural Paper, and the organization of County Societies. The county societies already formed will no doubt patronize you liberally. Finally, I would invoke the sons of farmers growing into manhood, to set apart one dollar for your paper every year, how hard so ever they may work to earn it. If they do, I promise them that it will lighten their work in the end, and prove the best laid out dollar they ever parted with. What more can I say? Much, but time will not permit me to say more at present. Wishing you much success for your own sake, and the sake of Agriculture, I am, &c.,

JAMES GOWEN.

Mount Airy 19th March 1851.

On Permanent Pasture, and the breaking up of old Grass Land.

It is a question among the farmers of England and Scotland, as to how long land should lie unbroken by the plough, and which is the most profitable mode of farming; to keep land permanently in pasture, or occasionally to break up old sod? As in all other departments of agriculture, this must be decided by circumstances, but of course the proper selection of these circumstances, which are to produce a decision of whether a thing is to be done or not to be done, will depend on the observation, the clear judgment, and the intelligence of the farmer. The question is one of great importance to all graziers, to the farmers of Chester, Delaware, parts of Lancaster in this State, to considerable portions of Virginia, and much of the Western country, certainly however of more interest to those portions of Pennsylvania, where grazing for the market forms the chief if not sole chane of profit, than to those more distant parts of the country, where land is much cheaper, held in much smaller quantities, and by no means as laboriously, as expensively, or as well fenced, as in those celebrated Agricultural Counties. The first question to be asked in discussing the matter, is, what is your soil? In Scotland where the farmers are strongly in favor of converting grass into arable land, and where they bring the best possible evidence, to support the practice by so reducing the large crops, their opinion is supposed to be a decision of necessity, from a deficiency of chalk in view, soil which is or is, supposed to be, calculated for the support of the natural grasses. In Ireland, where much land has been from time immemorial in pasture, the surface rests on a limestone bottom. In the best grazing parts of this state, there is neither lime nor chalk. But it must not be supposed that by the term "best" we mean that no part of the counties mentioned just now, that contain lime, are not fit for the fattening of a bullock. We mean nothing more than that those lime-stone regions are less fitted for permanent pasture, than those which contain no lime-stone. In the valleys of Chester, and Lancaster, the land will not hold grass but a few years, though they can no doubt fatten cattle, while a little farther South, in the same counties, or at least in the county of Chester, the land may stay in permanent pasture any length of time, though we know of none that have been so left, for more than fifty years. But we must not take the example of England, Scotland, or Ireland, for our model, even if there were great similarity in the soil; the difference of climate would compel the American farmer to an opposite mode of farming. The sun in those countries is only an occasional guest,

while here he is a constant companion; there they have incessant humidity, while here our rain, though more abundant, is less frequent, and rapidly removed. These create great differences in modes of culture, though we have seen but three obstacles to keeping our best grazing grounds in permanent pasture; the one is liable to drought; another liability, the small size of the farms; the third, the neglect of manuring. For the first there is no remedy but the plough, as a long continued drought, such as we had in 1838, repeated in 1844, does so much mischief, that weeds supplant the grasses, and oblige us to farm the ground. A small farm, such as are most of those within thirty miles of the city, also forces the farmer to the plough, or else to a frequent turning up of the same fields, which will inevitably do him a great injury, unless he go to the expense of heavy manuring. The third obstacle we have enumerated; a neglect of manuring is one that has its remedy if the farmer has means, or thinks it will be profitable to employ them in keeping up his grass land. It is no doubt true, that pasture manures itself, that is, the constant decay of vegetable matter, and the droppings of the cattle, form a somewhat slow but still a gradual enrichment of the soil, yet if small portions of lime are occasionally applied, now and then a top dressing of some kind, a really strong ground will put at defiance any punishment from drought, and only give way to the over stocking of some cruel and avaricious master. Any farmer who has a certain number of acres well set with natural grasses, cannot be wise in ploughing them. If he grazes, he is sure every year of an investment that will yield him some return without regard to season, he is rid of all anxiety as to crops, and their precariousness; and if he be a good judge of stock, and is wary as to his time of selling the crop he has to offer of rich sweet meat, is sure to bring him a good return. There are but two ways in those portions of this state near the city (where land is dear,) of making it give a good interest for the outlay, or in the value of the farm the dairy and grazing. In either of these, permanent pasture is important, as on such land the milk is considered richer, and the animal fattens far quicker. This we believe is the opinion of all experienced men. To both of these, tillage is diametrically opposed, and belongs to another department of agriculture. If carefully managed, the longer land is in grass the more it improves by the formation of vegetable mould. This cultivation and the growing of grain exhausts, so that pasture land once put under the plough, may be years in being restored to its original fertility.

A. L. ELWYN.

Philadelphia, April 1841.

Corn Planting.

LANCASTER, MARCH 15, 1851.

Mr. Editor:—In regard to the communication which you have understood was made to our Agricultural Society, I beg leave to explain, that it was read, rather for the purpose of illustrating a plan, or proceeding which had been recommended, than for the value the facts were supposed to possess. An important object of the County Societies, is to bring together and preserve the scattered information existing in the many separate neighborhoods of the districts in which the societies are formed. Experiments are often successfully made and useful results obtained, which, for want of means or opportunities of publishing the facts, benefit no one but the experimenter. Varieties of seed, and their preparation, modes of cultivation, manures and fertilizers, choice breeds of cattle and stock, implements of husbandry, fruit trees

and fruits, are often introduced and approved in one township, of which the next township knows nothing. But where an agricultural society is in operation, this state of things cannot continue. Each member will bring the contributions of his knowledge and experience to the general fund, which rapidly accumulates for the advantage of all. To promote that object, the members of our Association had been, by a resolution of a former meeting, requested to present at the subsequent meetings, subjects and questions that might occur to them, and which, leading to investigation and discussion, might elicit useful facts and very desirable information. As an example of what may be done in this way, the brief paper you referred to, was read to our Society at its last meeting. It related to a method of preparing seed corn for planting, which had been communicated to me a short time before, and of which I made a memorandum.

One of the most discouraging incidents, in the culture of that invaluable crop—Indian Corn,—is the frequent necessity of extensive re-planting, occasioned by insects preying upon the roots, or birds plucking up and devouring the young plant.

Mr. M. Zahm informs me, that many years ago, when he tilled some lots in the N. W. section of this city, Mr. R., who owned adjoining fields of similar soil, used to say to him—"How is it, that your corn looks so much greener than any other in the neighborhood?" Mr. Z. states that this was a very obvious fact, and he accounts for it in the following manner: When he was about to plant, he put his seed corn into a vessel, and having dissolved a small quantity of saltpetre in water, poured the solution over the corn until it was covered. He suffered the grain to continue covered with the water, until it swelled almost to bursting, when it was taken out and planted. He mentions the following as the effects:—1. The corn has a deeper and richer green during its growth; 2. It springs or comes up with more certainty, and grows more vigorously; 3. Worms, ants, and other insects will not touch it; 4. Birds avoid it; 5. It requires no re-planting; and 6. It ripens two weeks earlier.

When I asked him particularly about the quantity of saltpetre he used, he said there were two cents worth—just enough to make the water taste of it.—He also mentioned, that when the corn had come through the ground, he sometimes uncovered the plant and observed numerous minute drops or particles collected upon the roots or small fibres. He had seen the birds occasionally pull up a plant and immediately drop it, without eating any portion of it; from which he inferred that the saltpetre had imparted something that was distasteful to them. To the same cause he ascribes the fact, that the cut-worm which annoyed his neighbors, never molested his crop.

He moreover confirms the results of his experience by that of a friend, who adopted his plan of treating his seed corn, and was successful beyond his expectations.

From the remarks which were occasioned by the reading of the foregoing communication, it would appear that this method of preparing corn for planting, although of excellent use in a warm spring, might be prejudicial in a wet and cold one. A gentleman present, said he had tried it two years, in one of which it answered well, being followed by most of the good effects above described, particularly that of repelling birds and insects; but, in the second year which was cold and wet, much of the corn rotted in the hills where it was dropped.

The steeping of grain in a solution of saltpetre, in order to prepare it for germination is not a recent or even a modern improvement. It was used in Italy at the commencement of the Christian era, or in the days of Augustus, as appears from the Georgics of Virgil:—

“ Some steep their seed, and some in caldrons boil,
With vig’rous nitre and with lees of oil,
O’er gentle fires the exub’rant juice to drain,
And swell the flatt’ring husks with fruitful grain.”

DRYDEN’S TRANSLATION.

The utility of saltpetre as a fertilizer has been known and appreciated for centuries in England and on the Continent of Europe, but the nitre of commerce was not to be obtained in sufficient quantities or at a rate cheap enough to admit of its being extensively employed by farmers, until modern times.—Before the introduction of the Pernyian guano, perhaps no substance was deemed of so great importance to the growth of crops. Evelyn was of opinion, that if his countrymen could procure an abundance of saltpetre, they would need but little else “to meliorate their ground;” and Jethro Tull, placed nitre at the head of the list of those substances which he considered to be the essential food of plants.

The deep green color of the corn mentioned in the above statement, has often been observed as an effect of all fertilizers containing nitrogen, such as oils, blood, fish, soot, wine, &c., upon plants to which they were applied. Experiments on Indian corn, with saltpetre or nitre, may be recommended as of great importance, since that grain deserves to be ranked as the grand agricultural staple of our country.

A. L. HAYES.

Pennsylvania Farmers.

Mr. Editor:—You may think I have chosen a trite and worn out subject to lay before you readers. That it has descended on a good deal I am aware, but we need not fear exhausting a subject of so much importance and interest to our fellow citizens; and should I speak plainly to the farmer, I shall without much apology expect them to bear with me, as I claim to be one of them, having from my early youth either been with them in delving the soil, or fraternizing in their associations.

To be a “Pennsylvania Farmer” is, in other parts of the Union, almost as good as a certificate of excellence in the profession, and in a general sense I am willing to admit that the distinction is a just one.

I have rambled over a good deal of the Union—the Eastern and Northern, the Southern and some of the Western portions; and in no section of any considerable extent have I seen the same evidence of high cultivation and good farming as in many districts of our own state. A little of this favorable opinion may be attributed to partiality for my native state, but I have nevertheless been able to discover many glaring deficiencies.

In this communication I shall confine my remarks to barns and barn yards. The barns of Pennsylvania are world renowned; the external appearance of most of them is imposing at least beyond those to be found elsewhere. They are mostly built of stone, have bays, over-shoots, wings for carts &c., that in the aggregate afford a great deal of room. The internal arrangement too, of most of our barns, is appropriate and good, but to look at the other side of the picture, how few of them are kept in the neat, comfortable, and at least decent condition that is due to and consistent with the fine farms that surround them. A close inspection will betray broken spouts

that permit the water to run in floods through the manure, or to penetrate the foundation of the building; the door hinges are broken, the latches loose; the paint worn off, window shutters wanting &c. In the interior, cob-webs loaded with dust, hay seed, straw, old harness, agricultural implements, litter, &c., mixed up in dirty confusion, and all from the want of a little, a very little system and care.

This culpable deficiency in the order and care of their noble barns, strange to say, will often be found with men whose farms are patterns of neatness; their fields free from weeds; their fences clean and well kept, a careful and systematic rule of cropping, and depasturing observed; all showing good management and good rules except in the barn and cattle yard. This deficiency is gross beyond endurance, and our worthy farmers must set to work and “mend their ways.” I know that to tell men of their faults will often make them angry, but yet, they will nine times out of ten profit by the unpalatable admonition.

How few barn or cattle yards are planned with a view to economy in making and saving manure, and how little effort or ingenuity is exercised to increase this *gold mine* of the farmer. With every rain the water passes in from all quarters, except one, where it is discharged into the high-way, or an adjacent stream or a ditch, carrying with it and wasting the very essence of the manure; the soluble portions. After this drenching, the sun and wind play their part without intermission and that not only full scope, but full *time* also may be given to the elements, the gatherings of the stables and cattle yards are exposed to this destructive process from early winter, to mid-summer or autumn.

I know, Mr. Editor, it is easier to carp and complain, than to point out remedies, or to lay down rules that are efficient and practicable; this I shall endeavour to do in a future number, unless you find I have already said too much.

Allow me at all events to remark that there are many admirable exceptions to these charges. I know of several farmers within the circle of my acquaintance whose barn, cattle-yard, and stock arrangements, are patterns of neatness, system, and good order. To such the result is not only a source of pleasure but of large profit. Yours truly,

A. S. ROBERTS.

Philadelphia, March 6th 1851.

Education of Farmers.

The subject of Education appears not to be properly understood or appreciated by farmers generally. I do not mean that every farmer’s son and daughter should receive a regular course of Collegiate Education—be proficient in Latin, Greek, Hebrew, &c.; but, I do believe and contend that farmers should receive sound practical instruction in various branches of science, to enable them to cultivate their soils to the best advantage, and to cast their votes understandingly.

From a knowledge of chemistry they could analyze their soils—and at once become aware of its constituents; then they would know without fear of going wrong, what manure to use, and in what quantity to apply it, to ensure the most productive soil for any specified crops.

Under the present management, farmers grope in the dark—stable manure and lime are applied to all soils, no matter whether it is clay, loam or sand,—and in some instances, to my personal knowledge, with manifest detriment to the crops. Entomology is another branch of science with which farmers

should be familiar, to enable them to discriminate between those insects "that are their friends, and those that are their worst enemies." Geology, Mineralogy, Botany,—who will pretend that a knowledge of these and various other branches, are of no use to the tiller of the soil? But the reader may ask, how are farmer's sons and daughters to acquire so much learning? These things are not taught in our common schools! True, most true,—and never will be, until farmers themselves take the matter in hand, and refuse to employ the many ignorant pretenders, and inexperienced boys, who are too lazy to work, and who turn pedagogue as naturally as a tad-pole turns into a frog, because, it is so much more pleasant and congenial to their natures to sit in a warm room, than it would be to go out in the snow and storm to chop wood—besides, many teach school for a few years at the expense of the tax payers merely to qualify themselves for higher branches, careless of their charge, and the consequence is, children go to school year after year, and are none the wiser in the end.

If farmers would only combine, concentrate their efforts in the right direction, (there is now a fair chance of doing so through the State and County Agricultural Societies,) they would soon find that their influence has more weight than they ever imagined—that they are of some consequence in the body politic, and not as now the mere pack horses, to be used by politicians to ride into office. Again, farmers are remiss in not asserting their rights in another direction.—Millions of money are yearly expended by the National and State Governments for purposes of no utility to the farming community, while literally nothing has ever been appropriated towards encouraging agriculture, yet the cultivators of the soil are the main stay of all governments.

Then combine your own efforts for present advancement, and educate your children for future usefulness.

I will add an extract from another publication, for the purpose of showing at a glance, the numerical forces engaged in the various professions, and the influence supposed to be exerted by some of those classes.

EDUCATION OF THE FARMER.

"It is calculated that the divisions of the occupations of men of the United States, is nearly in the following proportion:—

Number engaged in Internal Navigation, -	33,076
" " Ocean, " -	56,021
" " Learned Professions, -	65,255
" " Commerce, - -	119,607
" " Manufactures, - -	791,749
" " Agriculture, - -	3,719,951

Thus it will be seen that those who are engaged in agriculture, are three and a half times greater in number than those in the other divisions. The agriculturists consequently have the physical and numerical power, and can at any time control every government in the United States, and give tone to public opinion. But do they? No indeed; for however powerful they may be in numbers, they are weak in influence, and this arises from the want of a proper education.

The sixty-five thousand two hundred and fifty-five engaged in the learned professions are intellectually stronger than the three millions seven hundred ninety one thousand nine hundred and fifty-one, engaged in agriculture, and therefore rule them. If it were not so, seven-eighths of the offices in the country would not be held by lawyers and doctors; nor would all the colleges and high schools be endowed principally for the benefit of the learned professions.

Farmers, when will you arouse yourselves to the dignity and importance of your calling, and educate yourselves to the height of intelligence which will make you the rulers instead of the ruled of the other profession? There is surely nothing to prevent this if you will only be true to yourselves."

Mountville, Lan. Co., Pa. JACOB B. GARBER.

Agricultural Societies.

Pennsylvania State Agricultural Society.

In pursuance to the Constitution of the Pennsylvania State Agricultural Society, the Executive Committee of said society, met in Harrisburg on Thursday the 27th day of February, 1851.

Members Present:—Frederick Watts, Joseph R. Ingersoll, Algernon S. Roberts, P. B. Savery, Abraham M'Ilvaine, Col. Henry Shnbert, A. O. Heister, Dr. Alfred L. Elwin, John Evans, Dr. John Irwin, David Mumma, Jr., Hon. Wm. Jessup, Finlaw M'Cown, J. S. Haldeman, Isaac G. M'Kinley.

On motion, the Hon. WM. JESSUP was called to the chair.

On motion, a committee, consisting of Col. HENRY SHUBERT, JOHN EVANS, and FINLAW M'COWN, was appointed to report at a future day, on the subject of a model farm.

On motion, it was

Resolved, That Wednesday, Thursday and Friday, the 22d, 23d and 24th days of October next, be fixed as the time for the first Annual Exhibition of the Pennsylvania State Agricultural Society; the first day to be appropriated to the judges for the examination of all animals and products presented for competition, the second day to the public exhibition, and the third to a ploughing match, and judgment thereupon.

On motion, the committee on the first Annual Exhibition had leave to report at a future day on the adoption of rules and regulations by which the public exhibitions shall be governed, and as to the place where it shall be held.

On motion, it was

Resolved, That the President of the several County Agricultural Societies in this State be requested to furnish Dr. Alfred L. Elwin, of Philadelphia, Corresponding Secretary of the State Society, with information as to the existence of their respective societies.

On motion, it was

Resolved, That each of the members of the Executive Committee of this Society be and he is hereby authorized to receive from such individuals who desire to become members, the sum of one dollar, and forward the same to the Treasurer of the Society, with the name and address of such persons, who shall thereupon be members of the Society, subject to the payment of one dollar annually, or upon the payment of twenty dollars, member for life.

On motion, it was

Resolved, That in pursuance of the constitution of the Society, the last Tuesday of each month be the time fixed for the meeting of the Executive Committee, at the house of Mr. Herr, in Harrisburg, until otherwise ordered.

On motion, it was

Resolved, That the thanks of the Executive Committee be tendered to Professor H. D. Rogers, for his presentation to the Society, of Professor Johnson's Agricultural Report on the Province of New Brunswick.

On motion, it was

Resolved, That the proceedings of this meeting be

published, under the direction of the Recording Secretary, in all the papers of this State favorable to the promotion of agriculture.

The committee, consisting of Frederick Watts and J. R. Ingersoll, appointed to prepare an Address to the People of Pennsylvania, reported the following, which was unanimously adopted by the Executive Committee:

TO THE PEOPLE OF PENNSYLVANIA.

That business of life which directly occupies the attention of three-fourths of mankind, and intimately concerns all, demands the active influence of every conscientious man. There is no art or science in the whole circle of human knowledge, which presents for exploration, so expansive and interesting a field as that of practical agriculture; nor one whose discoveries already made have been so little infused into the ordinary stock of knowledge of those who are actually engaged in its daily and universal operation. The farmer knows the necessity for ploughing his land, but he does not think and sufficiently understand why he ploughs it; and the latter is quite as important as the former, so that he may know how to plough well. That manure will enrich the soil is a fact; but to know what it is, how and when to use it, and how it contributes to the growth of plants, is that kind of knowledge which is only second to the fact itself. The farmer has a certain amount of knowledge of seed time and sowing; but if nature's operations in the germination of seed and the growth of plants were to some extent infused into his daily observations and reflections, his vigorous and ever active mind would strike out some new path in his own pursuit, leading to that profitable result which can only be attained and relied upon when it can be traced to the blended source of theoretical reason and practical experience.

The appeal which we now make to those who are engaged in the business of agriculture, and to all who appreciate its importance, is not that you shall for a moment relax those every day occupations of active life to which you are accustomed, and which, proverbially, you pursue with so much industry; nor do we ask of you to delve, through the medium of books, and laboratories, into the mysteries of Agricultural Science; but we do earnestly solicit you to unite with us, in the effort now being made, to establish and cherish that which may be justly deemed the only means by which the farmer may be made to keep pace with the rest of mankind, in that march of improvement of which this age has been so prolific.

Agricultural Societies, because of the influence they have exercised, and commensurate benefits they have bestowed upon every community where they exist, commend themselves to universal approbation; the light which they have shed, and their capacity for disseminating it, seem to point them out as the only active agency by which the business of the farmer shall be so cared for, that he may derive all the advantages which shall be developed by time and experience. Let no man wrap himself up in the selfish security of his own knowledge, or console himself with the reflection, that his influence would not be felt, but rather let him manfully step forth, with the determined purpose, zealously, to aid in the prosecution of a work which promises so much practical usefulness.

The late convention which assembled at Harrisburg, has taken the initiatory measures for the establishment of the "Pennsylvania State Agricultural Society;" its constitution has been adopted, and its officers elected. Upon these officers as an Executive Committee, the duty is devolved to "keep such gen-

eral charge of the affairs of the society as may best promote its interests." It is in this capacity that we now call your attention to the subject, and ask you to unite and co-operate with us in the measures which have been adopted to insure a successful issue.

FRED'K WATTS,
JOS. R. INGERSOLL.

By order of the Executive Committee.

ROBERT G. WALKER, Secretary.

Agricultural Geology.

Agriculture and Geology.

The subject of Agricultural Geology is new, but the age has passed away, in this country, when old errors were preferred to new truths. I should, first, express my sincere desire that the Farm Journal may prove useful in agricultural Science (for agriculture is entitled to a place, and name, among the fixed Science's) the most useful, and honorable, of all scientific pursuits, viewed theoretically or practically. The word Geology is derived from two Greek words, the one meaning the earth, the other a description or history, so that Geology is a description of the earth; although it has special reference to changes and the laws governing the changes of the earth's surface.

None will deny the importance of a knowledge of the earth, its soil, minerals, and rocks either to the practical or scientific farmer. The man who has the most thorough acquaintance with ploughs, or anvils, other things being equal, will make the best use of them. So it must follow that he who has the most thorough knowledge of the earth, its laws, and ingredients, other things being equal, will be best qualified to cultivate its soil. In agriculture, as in all things else, it is not knowledge, but, in too many cases, the want of it, which prevents persons from effecting their desired ends and objects. Agricultural chemistry, for the last few years, has engrossed, and very justly too, a large share of public attention and agricultural geology will not fail to be equally useful.

In this essay, (somewhat of a general or introductory nature,) I would call attention to the relation of animal and vegetable life in different forms, to the globe on which we live. It is a singular fact that a connection has been observed between different varieties of animal and vegetable life, and the two important motions of the earth, the one annual around the sun, the other diurnal on its own axis. Mariners who have explored regions near the North pole, where the day and night are weeks or months in length, have found it necessary to sleep so many hours, and at a period corresponding to the rotation of the earth on its axis; and those who sleep in the day and not in the night feel the ill effects of it. The whole class of periodical diseases can only be explained on the principle of the relation of man's life to the earth's motions. The gravitating force of the earth, and the projectile force of the earth resulting from its rotation on its axis, have an important connection with the circulation of the blood, in the human system. The growth and falling off of the hair of many animals, will in most cases, be found to be periodical, and these periods will be seen to have reference to the annual motion of the planet on which we live.

Vegetable life, will be found to have a more decidedly marked relation to the motions of the earth than that of animals. Every one doubtless has observed that one flower will bloom in the evening; another in morning; a third at noon; and a fourth at midnight. These flowers will observe the time of their blooming as punctually as a clock. Linnaeus, the celebrated botanist, constructed a floral clock by bringing a variety of flowers together, blooming at different hours of the day, and in this manner the opening and closing of flowers would indicate the hour. Here, a connection between the life and existence of the plant bearing the flowers, and the daily motion of the earth on its axis, is clearly indicated. To show the relation between vegetable life and the annual motion of the earth; I will produce an example of this

familiar to all. Some forms of vegetable life increase their size by a series of deposits on the interior. The cane is an example of this. Others by a succession of layers on the out side. The oak is an example of this. The concentric rings of the oak making these successive annual layers or deposits, counted, will tell the age of the oak, so that there is a connection between the formation of such a ring, and the annual motion of the earth around the sun. The relation of vegetable life to different kinds of soil, is manifest to all. One plant in its nature is adapted to a sandy soil; another to a wet marshy location; one to a mountain region; another to a lowland country. One requires an excess of sand in the soil; another an excess of lime.

Vegetable life has an equally important relation to geographical localities; one requiring greater warmth, another more cold. In passing from the Equator to the poles, every stage of vegetable life is seen; and this corresponding to the altered conditions of climate. Near the Equator the tropical forests, and tropical vegetation are seen; passing North, the region of the sugar cane, the orange, the cotton, the peach, the apple, the wheat, and the pasture lands, successively appear, and far toward the South, the region of moss shows itself. In passing from a flat country in tropical regions, to the top of a high mountain, every stage of vegetation, from tropical plants, to the mosses of northern regions, will appear. To understand this relationship between vegetable and animal life, and the globe, two things are necessary; first knowledge of the laws governing animal and vegetable life; the second, the laws governing the changes of the earth's surface. It should be the province of Agricultural Geology, to investigate these relationships in their several branches, especially the connection between vegetable life and the earth.

April 1, 1851.

H. S. PORTER.

Importance of Ventilation, Cleanliness and Draining, for the preservation of the Health of Domestic Animals.

Brute animals, like the human race, are subject to sickness, and this often to such a fatal extent as to cause great loss to individuals. This difference, however, exists—that human subjects generally recognize their ailments on the slightest premonitions, and are thus often led to a timely withdrawal from the sources of mischief; or the adoption of means for arresting its further progress, whilst dumb animals when they once show their sickness, are generally in very desperate conditions. Hence the very large proportions of those attacked with sickness that die, and the great necessity of removing the causes and preventing the occurrence of disease.

Districts of country which prove unhealthy to man, are equally so to the inferior animals, until these have become acclimated. The symptoms will of course be modified by the differences of organization, and they will therefore vary greatly from those developed in the human family from the action of similar agencies. Thus we often hear of horses having the "Blind Staggers," or the "Yellow Water," or of the prevalence of the "Hollow-llorn" among neat cattle, the first named affection being a *brain fever* or malignant typhus, whilst the two last are forms of bilious fever.

Whenever we find epidemic diseases prevailing amongst the human family, it denotes a condition of the atmosphere which will exert a malign influence equally upon animals, especially among that most delicate and valuable one, the Horse. Greater care than usual should at such times be taken, to avoid the night air, and all exposure to cold and wet, just as we would act for the preservation of health within our noble selves. But in housing animals for protection against the inclemencies of the weather, they are often exposed to great dangers from the arrangements of the stables and other buildings.

Dr. T. Southwood Smith, has devoted great attention to the exploration of the causes of sickness, and the means of determining these in England, and from the minute reports made through their complete system of Registration, which has enabled him to identify sickly

and healthy localities, with great precision. "When-
ever" says he "fever is frequent, there is uniformly a bad drainage, bad sewerage, a bad supply of scavengers, and a consequent accumulation of filth." If a map be drawn or coloured so as to designate the places where fevers prevail have prevailed to a great extent, and showing also the localities where drainage has been effected by the Health Commissioners, appointed to attend to this public duty, it will be found that where the commissioners of sewers have not been, there fevers are still prevalent; but wherever they have been, there, fevers are comparatively absent.

Filth and moisture conjoined with heat are the greatest enemies of health. The foul products resulting from the combination of these elements and agents are detrimental to the health of all that breathe the air with which they become blended.

The addition of lime and plaster to compost heaps, tends to arrest the too sudden decomposition of vegetable and animal matter, that would otherwise, by surcharging the air, operate injuriously upon the health of animals confined in stables or cattle yards. Hog Pens are perhaps the most frequent generators of foul and pestilential air, since they are the common receptacles of every kind of vegetable and animal refuse, with abundance of moisture to cause their rapid decomposition.—We very often hear of hogs suddenly dying, in apparently high health, and whilst rolling in fatness. Their loss is generally ascribed to something eaten, of a noxious quality. But the noxious influence which operates in nine out of ten such cases, is the foul air emanating from the reeking collections of filth which are but too often found in and about pig-styes. The losses from this source if they could be ascertained and estimated, would make an aggregate that would much surprise many who have overlooked this matter. And we may say the same in regard to the pecuniary losses to individuals,—and of course to the country at large,—from diseases and mortality among other domestic animals, attributable to causes generally overlooked, and in most instances readily removable, through the adoption of proper means to secure ventilation, drainage and cleanliness, topics upon which I may again have occasion to trouble you in another number of your useful work.

As one actual occurrence will go farther than fifty un-backed assertions to establish any important fact. We will refer to a case which we find in the last edition (1851) of the "Farmer's and Planter's Encyclopedia." It is there stated under the head of Ventilation—a long and deeply interesting article,—that a farmer had a large number of sheep housed to feed on Mangel Wurtzell, a great number of them sickened and died, killed as he supposed by the food supplied to them. A Veterinary Surgeon who was consulted, and who happened to be well informed upon the subject of the benefits of ventilation, pointed out the remedy—a better circulation of fresh air among the over-crowded sheep-fold, after the adoption of which there were no more deaths, and the sheep thrived well.

One of the greatest safeguards against the generation of noxious airs from putrefaction, is dryness. For, without the presence of a certain degree of moisture no decomposition can take place. Sufficient dryness can generally be secured by additions of straw and litter from time to time. Dryness about the manure heaps may by some, be thought to prevent that proper stage of decomposition necessary to bring it into the best state to exert its fertilizing action. This, however, is a topic which may perhaps be taken up separately on some other occasion. Meanwhile, we recommend as an essential point for the preservation of health, especially in the latter part of summer and in autumn, the most perfect removal of all stagnant ponds of water from the vicinity of places where horses or any kind of farm stock are accustomed to be kept.

Philadelphia, April, 1851

E.

Agricultural Education.

Agricultural Schools in Europe.

Last year Mr. Hitchcock, President of Amherst College, Mass., went to Europe, probably on some mission of science, but without any Agricultural design. Soon after his arrival in England, he was informed that he was appointed a Commissioner on the subject of Agricultural Schools, and was requested to examine all such institutions in the different nations of Europe, and report thereon to the Legislature of Massachusetts. I have this report before me, and propose the giving to your readers such an abstract of it, as will tell them, how much *has been* done, by what we call Despotic Europe, and will at the same time, disclose to them how much *has to be* done, by Republican America. It seems, that in those countries, where our people are taught to believe that the Governors are all tyrants, and their subjects all brutes; there are three hundred and fifty-two Schools of Agriculture, and that the nation most benighted, as we suppose, has the most, excepting France.

"Within a few years past, the government of Russia has been much awake to the subject of Agricultural Schools. No less than sixty-eight of these have been established."

"Since 1845, not less than fifty inferior schools have been established in connection with model farms. Some of them have a four year's course, on farms varying from 1,375 to 2,220 acres, with from 100 to 200 pupils. They are really of a higher grade than the farm schools of other countries."

This is the spirit of savage Liberia. The country next to Russia, in the number of its schools, is the one with which this country has more sympathy than with any other, and which we are daily told, is dull and degraded Ireland. She has sixty-three Agricultural Schools. France, has the credit of having been the first country in which an Agricultural School was established, and though now she has 75, yet all, or nearly all, were founded under her Kings. After the guillotine had destroyed a host of her citizens, the sword came into action, while the plough was thrown into contemptuous neglect. The chief duty of farmers, from the opening of the revolution, during the republic, and under the Empire, was to rear sons for the field of battle. A long peace, or rather a partial peace, has opened upon the Governors of nations, the absolute necessity of employing and educating, the natural if not intense activity of mind, among those they govern, and the plough is gradually, but surely, making its way, even in despotisms, to a position, a million fold more useful, and quite as exalted as the sword.

Of all the schools that Mr. Hitchcock visited, or heard of, those of Ireland, appear to have been the most efficient, and the most useful. There are two grades, "Model Agricultural Schools" and "Ordinary Agricultural Schools." The pupils in the latter, usually quite young, if distinguished, pass into the former, and are fitted to become teachers. In all these schools, of every grade, literary instruction is combined with agricultural; and indeed, the ordinary schools, are only elementary schools, in which agriculture is taught." An impression exists, among the people of this state, that every thing like agricultural education, is a mere inculcation of theories. From this, it may be supposed, that it is meant, that a farmer is not to be educated at all, that as the larger part of his work is done by his hands, he has no use for his head, that all science connected with his occupation is worthless, and that a knowledge of the

principles of the art by which he lives, is a kind of fanciful refinement, beneath his notice. This report shows us how such ideas have been broken up in Europe.

"It is a most important fact to be noticed respecting all the agricultural schools of Ireland, and indeed of all Europe, that are sustained by the government (excepting perhaps in a few colleges) that a farm larger or smaller, is always connected with the school, so that the theories taught are there tested and exhibited in practice. Indeed on the continent in some places, unless the attached farm can be made to exhibit a state of cultivation fully equal to any around it, the government withdraws its support. In these facts we see that the objection so often urged in all countries against agricultural schools, that they teach mere theory, is done away with; for here, unless the instructors can show the truth of their theories in practice, they lose all patronage."

Institutions like these might be established in this country, with the same results, that we are informed have been brought about in Europe, and they will be, when the people are more fully awakened to their importance.

A. L. ELWYN.

[We shall be pleased if our correspondent will favor us with additional articles, on the importance of Agricultural Schools. The subject is attracting much attention in New York and Massachusetts, and should also in Pennsylvania.—ED.]

Michigan Double Plough.

Mr. Spangler—Permit us to call the attention of Farmer's to the Michigan Double Plough. We gave it a thorough trial, with three of the best patterns of ploughs in our neighborhood, having spent a full day in testing its qualities in loam, heavy clay and strong soil, and have no hesitation in saying that in any soil the work is more thoroughly and better done, than by any plough we have seen in use. The surface has more the appearance of being spaded than ploughed, and the furrows are scarcely distinguishable.

For the satisfaction of those who have not seen the plough or a draft of it, we give the description of the Patente. "The plough consists of two ploughs, placed one before the other, on the same beam. The forward one takes a furrow from 3 to 6 inches deep, separating the roots of the grass or vegetable matter, and lays its slice surface down in the bottom of the previous furrow: and the hind one furrows from 5 to 6 inches deeper, and raises and deposits its slice on the top of the former one."

We thought before trying it, there might be a difficulty in the hinder mould-board raising the ground sufficiently to mellow, and at the same time to clear the first furrow slice, and leave a clean furrow for the next round. We were agreeably disappointed. The second furrow in the subsoil, by the construction of the mould-board is raised sharply, and broken and mellowed, and spread loosely and evenly over the first furrow; then leaving a fine and clean soil on which to plant or drill; and burying grass, sorrel or weeds at a depth we think sufficient to destroy vegetation.

Although we had not the Dynamometer in the field, it was the opinion of all, that the draft was no greater than the lightest running plough tried in competition. The one we tried was right-handed, while ourselves, our men and horses were accustomed to left hand, a disadvantage to the Double Plough in a trial of quality, that will be realized by every farmer.

Left hand ploughs on the same principle are now being manufactured by Mr. Henry Gilbert of Harrisburg, and if got up as true as the one we tried, they must, both as a sod and stubble plough, supersede the best in use in our neighborhood.

A. O. HIESTER,
CHARLES E. HIESTER.

Harris'g, April 1.

The Potato.

The season for planting this valuable Vegetable Tuber, is approaching, and although much information in regard to it has been published in various works, it is to be regretted that more attention has not been bestowed upon it, especially with respect to the selection of good seed.

Instead of raising fine white mealy Potatoes, which always bring a good price in market, many persons content themselves with raising mongrel varieties of the most indifferent kinds, which are hard to boil, and pasty, although it is as easy to raise superior vegetables as inferior ones, each requiring the same amount of time, labor, and attention. The seedling should always be of the largest, free from all blemishes, of only one variety, and having the wounds caused by cutting, well dried before planting.

The Potato may be divided into three distinct parts: the crown, the body or middle part, and the base. Each of these if planted separately, will produce at different periods and of various sizes and qualities,—facts which have fallen under my own observation. The crown or small end is full of eyes and produces potatoes from 8 to 10 days earlier than any of the other parts, and of a superior quality, so that this part should invariably be planted alone. The body or middle of the potato, (which may be divided in two or three pieces according to the size of the tuber) produces fine large potatoes of the same quality as the parent; whilst the produce of the base is but small and of an indifferent quality, and should therefore always be rejected, and fed in a boiled state to the animals of the farm.

The good or bad quality of the Potato, frequently depends upon the seasons and soil, which may not be favorable to its full growth and maturity—either too wet, or too dry,—or the soil not properly enriched with vegetable compost; but still more depends upon the proper selection of the seed. Good mealy potatoes will reproduce their kind, but no good tubers can be expected from such as have a yellow pulp or boil tough and pasty, whatever care may be bestowed upon their cultivation. Like produces like, and it is therefore indispensably necessary in order to raise a good and palatable variety of potatoes, to cultivate none but the best.

Lancaster, April, 1851.

J. P. H.

[For producing early potatoes, Mr. K. Knight recommends but one or two eyes to be left in the *set* or cut seed potato, and he states that if the principal eye be placed uppermost, the shoots will be few and early, as well as strong, but if placed differently, they will be late and weak. Mr. Appleby (quoted in the Farmer's Cabinet, vol. 8 pp. 211; see also pp. 155) states that mealiness in potatoes arises from overripeness, the tubers not being taken up until the tops are quite dead; but whilst this adapts them for the table, it injures those intended to be planted the succeeding year, so that the latter should be taken up whilst the tops are still green. The tops of up-land potatoes and those of cold districts, being killed by the frost before the germinating principle is affected by over-ripeness, it is generally believed that the occasional superiority of these for propagation arises from intrinsic differences.—ED.]

GRAFTING GRAPE-VINES.—A. M., (Detroit.) Bury your grafts in a cool, shady place, covering two-thirds of the lower part, till the stocks that you wish to graft have begun to grow, and their leaves are as large as a shilling. Then graft, and you will be successful. The great flow of sap, almost destitute of organizable matter, in the grape-vine, often prevents the graft from uniting with the stock, when set at the usual time.—*Horticulturist.*

Notices of New Publications.

Fourth Annual Report of the Board of Agriculture of the State of Ohio. Columbus, 1850. pp. 304.

This stout volume is an evidence of the vigor with which agricultural improvement is prosecuted in Ohio. It has been prepared under the general "Act for the encouragement of Agriculture," by the "Ohio State Board of Agriculture," and opens with a general account of the subject by M. L. Sullivant, President of the board, including a number of valuable suggestions. The first section of the "Act" provides that when a County Society has secured a sum of from \$50 to \$200 (under certain restrictions,) a similar sum may be drawn from the county treasury, the money to be applied to awarding premiums "for the improvement of soils, tillage, crops, manures, implements, stock, articles of domestic industry &c." The County Societies are governed by a uniform set of rules, and they prepare accounts of the condition of Agriculture, which are sent to the central board to be used in preparing the annual reports to the Legislature.

The Board reported a premium list of *three thousand dollars*, to be competed for at the State Fair held at Cincinnati, on the 11th 12th and 13th September 1850. The nature of the premiums may be judged from the following examples:—for the best bull \$20; best cow \$15; best yoke of oxen \$15; best sheep \$10; &c., for various grades; best pair of matched horses \$20; second \$10; best lot (or pair) of various fowls \$3 each lot; best plow of 7 different kind \$7 each. The premiums extend to a great variety of implements, down to hay forks, wash-boards and axes; and to maple sugar, salt, linen, carpets, mittens, quilts, needle work, bonnets, &c., so that skill in a great many departments may meet with an acknowledgment. Many of the premiums go to the Horticultural and to the Mechanical Departments.

Most of the volume is devoted to replies of the County Societies (or of individuals) to a list of queries under nineteen heads, and these show the condition of agriculture in most of the counties of the state, in alphabetical order. The replies occupy from half a page to five pages, and in some cases all the queries are not answered. As useful examples of the mode of preparing the replies, we abstract those of two counties, one on account of its meagreness, and the other for its fulness.

LUCAS COUNTY.

1. *Principal Crops.*—Wheat, Corn, Oats, Buckwheat and Hay.
2. *Wheat.*—Average yield of this year, 15 bushels per acre, somewhat injured by rust. Aggregate amount, 250,000 bushels.
3. *Corn.*—Average yield this year 40 bushels per acre; aggregate amount 600,000 bushels.
4. *Oats.*—Average yield, 50 bushels per acre; aggregate amount 150,000 bushels.

5. *Grass and Hay*.—Average yield of Hay, $1\frac{1}{2}$ tons per acre.

7. *Root Crops*.—Potatoes somewhat affected with the rot—not so much as last year.

10. *Other Crops*.—Buckwheat yields 25 bushels per acre.

13. *Pork*.—Aggregate amount 10,000 barrels exported to some extent.

19. *Mills, &c.*.—Ten Flouring mills, two of which are for custom work only—one oil mill—one woolen factory—thirty saw mills, ten of which are propelled by steam.

ASHLAND COUNTY.—(By HENRY MILLER.)

1. *Principal Crops*.—Wheat, corn, pork, oats, clover-seed, barley, rye, timothy seed, hay, potatoes, butter and cheese.

2. *Wheat*.—The usual average product per acre is 13 bushels. The varieties most approved are White, Blue-stem, Asbridge, Mediterranean and Valley wheat. The greatest difference in the weight of wheat, in the aggregate, is 23 lbs—the poorest weighing 45, the best 68 lbs. The two first named varieties have precedence to all others with which I am acquainted, either from experience or from inquiry—exhibiting, generally, a plump white grain; their bran and bald head, which render them far more pleasant to handle than bearded varieties, and under favorable culture, and suffering no casualties, will yield 30 bushels to the acre. The Mediterranean is sown extensively on account of enduring the winter, and being fly proof, thus measurably escaping two great injuries. The objections to it, by some farmers, are, first—its reddish, brown, color; second—yielding less than many other kinds; third—is liable to be prostrated by slight winds. This variety is a bearded red chaff. There are many other kinds—stubble, pea, river, white flint, club, &c., all of which possess some one, two or three peculiar characteristics, which render them either favorable or objectionable to the farmer. The last named has two high commendations: first, that of enduring a storm that would prostrate all other varieties; second, growing erect and yielding well on rich bottom land. The white wheat, asbridge, white, bluestem, white flint, are the varieties from which superfine flour is generally made. There is but little difference in time of ripening, winter kill, rust and fly, between the last mentioned, (except the Asbridge, which ripens a few days earlier) than any other kind. Any variety will ripen from two to five days earlier on the north side of land bounded there by wood land, or about the same difference occurs with a field having a southern inclination.

During the harvest of 1848, there occurred frequent rains and cloudy days, which caused much wheat to sprout just before cutting, so that in the markets it was named forked wheat; but the Asbridge was water proof in that respect, having a bright smooth chaff, entirely enclosing the berry.

The land best adapted for wheat has a gravelly loam, with clay sub soil, and is sufficiently undulating to conduct off all superabundant water. Barn yard manure, well rotted, measurably answers the necessity for lime, as it is a fact noticed by every observing farmer, that our wheat, under a favorable growing season, and suffering no casualties, is plump, and yields from 25 to 30 bushels to the acre. Lime would be best adapted for rich bottom land, to give solidity to the straw, while barn yard manure would be worse than nothing. The best system of culture is to plow, deep in lands, 16 feet wide, sowing as near the 20th of September as possible, and harrowing twice the same way. Some fields have been put in with the cultivator and look well. The wheat drill would be the greatest implement of husbandry that could be introduced into this county. The kind of injuries to which our wheat is most liable, according to their relative extent, is first, fly, drouth, winter kill, rust, &c. The rust was the most extensive injury with us last harvest, extending all over the county. We cannot prevent its ravages, but measurably escape them, by

sowing on the first of September to ripen early; but in that very attempt we may give license to the fly. The aggregate amount produced this year, is about 45,000 bushels. The usual yearly average is about 600,000, and from 3 to 400,000 bushels are annually exported.

3. *Corn*.—The usual average yield per acre is 50 bushels; this year 65. The varieties are numerous—some of which are the large yellow, white flint, small yellow, and an indiscriminate mixture of various kinds. The large yellow grows very tall, has long large ears, and ripens tolerably early, and is much esteemed by some farmers. The white flint (so called because it is a very hard solid white grain) has a short thick ear, is hard to husk, and hard to thresh. It moulds easily in a wet husking time, but when well dried weighs 60 pounds, and makes excellent fine white meal. The small yellow grows short, has a small red cob, ripens earlier than any other kind, is less liable to damage by wet weather than any other kind—may be planted early, or as late as the first of June, with great success—producing roasting ears in six weeks. This variety has been grown unjured to this climate for twenty years, is remarkably easy to husk or shell, and yields more good corn with less labor than any other variety. Of this variety I raised in the year 1847, 133 $\frac{1}{2}$ bushels to the acre, without hoeing. It was checkered and planted two feet ten inches apart, three grains in a hill. The whole crop averaged 110 bushels per acre, including a portion of land rather wet. In the year 1848, I introduced a Kentucky variety which averaged 159 bushels per acre, and the best square rod measuring mid way between the rows yielded at the rate of 186 bushels, 1 peck, 6 quarts. It bears some resemblance to the gourd seed, but it is more solid.

4. *Oats*.—The usual average yield is 30 bushels per acre. The past season 25. The varieties grown are the Native, the English, and Side oats. The native oats is more extensively grown. It yields more in bulk to the acre than the English, but probably not in weight. The former weighing 32, the latter 38 pounds per bushel. The Side oats yields from 5 to 10 bushels more per acre than either of the others, but ripens 8 or 10 days later. The English is the earliest.

5. *Rye & Barley*.—The usual product per acre is 20 bushels. The supposed amount annually raised is, barley 15,000; rye 10,000 bushels. Of the latter, a short variety has been introduced, but as to its character, I know but little; also spinless barley, which yields well on rich land. The usual prices are from 40 to 45 cents per bushel.

6. *Grass & Hay*.—The most approved variety for meadow is timothy, making incomparably more wholesome hay than clover, for horses. Clover pasture is excellent for horses and cattle, but in hay it is quite objectionable for its great tendency to produce heaves in horses. Its product per acre is one ton—timothy one and a half ton.

7. *Root Crops*.—The usual average yield of potatoes is 40 bushels. This year's growth has been less liable to the rot than usual, though the yield seemed more deficient from the quantity planted, owing probably to the dryness of the season. The varieties most approved for yield and stock are the large red cudsels, quality for table, the Neshanock, and pinkeyes. The Neshanock has been the most liable to disease. The best mode of culture is to plant on a loose porous gravelly loam, plowed 8 inches deep, checkered for hills 2 feet 10 inches asunder, and 3 inches deep. This would leave a loose substratum of 5 inches below the tuber, which is so highly necessary, through which all unnecessary water can readily filtrate. Lime alone, for manure, is found better than any other one species for potatoes. Lime and ashes have been used to prevent rot, but without benefit.

Turnips are raised abundantly for table use, but little or no root crops are raised for sale.

8. *Fruit*.—The character of our grafted fruit is excellent, having nearly or quite all the varieties of good

grafted fruit, except peaches, which are nearly all seedlings, and many of them worthless. More than 4-5 of our apples are seedlings, and our grafted fruit is obtained mostly from grafts put on seedlings about 10 years ago, and it is a wonder to every enterprising farmer that thousands of worthless trees are yet standing unrenewed, occupying room where grafted fruit might grow. Fruit is but little exported, either green or dried state, being mostly used for home consumption.

9. *Seeds*.—The quantity of cloverseed annually produced, is 7000 bushels; timothy, 4000; flaxseed, 15,000. The usual average yield per acre is, flaxseed, 10 bushels, worth 80 cts.; cloverseed, 2½ worth \$3; timothy, 8 bushels, worth \$1 37½ per bushel.

10. *Other Crops*.—Flax, but not hemp, is raised to a considerable extent for the fibre; one acre will yield 150 ordinary bundles, worth 6½ cents. each, when threshed; when scutched, each bundle yields 5 lbs., worth 8 cts. per lb., equal to 52 dollars per acre. Now any man can calculate the expense of harvesting, threshing, spreading for rotting, turning 3 times, gathering up, drying, breaking, top dressing and scutching, for the amount of the expenses depends much upon the extent of, and convenience of the preparations for getting it out. Tobacco is raised only for home consumption to a very limited extent.—Field beans, hops, mustard seed, madder and mint-oil, command little or no attention.

11. *Dairy Product*.—The probable amount of butter manufactured for export is 700,000 lbs. worth 9 cts. per lb. Cheese, 600,000 lbs., worth 5 cts.; the greater part of which is made in the northern part of this county, where the soil is better adapted for the dairy than for the crops. There has been some marked improvement in the quality of cheese and butter, and there are thousands of lbs. made here equal to some of the best that was ever offered to an agricultural society. So far as I can ascertain, our native breeds of cows are preferred for dairies, as many of them are extraordinary milkers; one which I saw, yielded, when at her best, a bushel of milk a day.

The average yield of butter per cow, is three pounds per week; cheese seven pounds. Some neat Durhams have been introduced by Mr. Stude, of Sullivan, and others. They are represented as more valuable for beef than our native cattle. I am not prepared to state their relative merits for the dairy with our native breeds.

12. *Sheep and Wool*.—The aggregate amount of wool is about 200,000 pounds a year. I am informed by an extensive wool merchant and manufacturer, that the quality ranks equal, if not superior, to any county in this State. Clearcreek township alone yields 20,000 lbs. fine wool; 15,000 of which sold for from thirty to thirty seven and a half cents, the average is twenty-five cents per pound.

There is a great increase in the number of sheep, and a great improvement in the character of the flocks. The Dickinson sheep are preferred for their lengthy and fine staple, heavy fleeces and robust constitution. The Saxon-merinoes for the extreme fineness of fibre, and therefore, selling at the highest prices. The South Downs are becoming numerous on account of their large size, heavy fleeces, fatting easily, and are therefore of ready sale to the butchers. So each variety has its own important peculiarity, which renders it difficult to decide what kind is most preferred.

13. *Pork*.—The supposed aggregate products of pork in the county is 15,000 barrels. Its value here will average \$2.75 per hundred.—The hog stock has retrograded for the last eight years, owing to the indifference of farmers in that department. Fourteen years ago, a number of Berkshires and Chinas were introduced, and a cross of these were the neatest and most profitable ever raised. There are a few left, and farmers are improving upon them. There are some grass breeds here which grow large, and appear well when fat, but they are hard to keep or fatten. Upon the whole, a perfect cross of

the Berkshire and China is preferred as the most profitable, as they fatten very easily at any age. If pigged in March, they may be butchered in November, weighing 200 lbs. They are much noted for their harmless and docile disposition; and we consider that kind of a hog is the best which will produce the most pork in the shortest time with the least possible expense.

14. *Beef*.—The number of cattle annually raised in the county, is 7000, of these, 3000 are used for home consumption, and the rest exported. The average value of each, at 3 years old, is 15 dollars.

15. *Horses and Mules*.—The number of horses annually exported, is about 2,500. This county has always been noted for its great number of good horses, and great exertions are made by our farmers to raise good draught horses. They generally range from a medium to a large size, and frequently sell at 125 dollars a head. The average value at 3 years old, is 75 dollars. The number of mules is very small, and farmers have no inclination to raise them; probably on the ground of their ill appearance, without considering their relative merits.

16. *Implements*.—The only implements or machinery introduced, are threshing machines, and clover hullers of the best kind, a few rollers and some good plows. A wheat drill from New York, and a drain plow from Indiana, were exhibited here, but no sales were effected.

17. *Other Improvements*.—There have been no experiments in the renovation of the soil worth naming, except with barn yard manure. Lime is obtained from a distance, at too great an expense to apply it profitably to our soil. Our creek bottoms are almost inexhaustably fertile. I have a piece now in corn which has been under cultivation for 13 years in succession, with but one manuring and 2 years in clover, and yet the tenth crop yielded 133½ bushels of shelled corn to the acre without hoeing. This year it yielded 70, with the same culture, though planted June 4th, (rather late.)

Drainage is effected to some extent with plow and spade, and to great advantage. There is nothing at present in the whole process of agriculture, from which farmers would derive greater profits from a small amount of labor or capital, than by draining the thousands of fertile acres in different parts of this county, grown over with wild grass, and covered several months of the year with water. To render such land most profitable with the least expense, is to cut drains in a dry time, mow off the wild grass, and sow timothy, either in July or August, or early in the spring; and in a few years the timothy will entirely usurp the growth of wild grass, and yield 2½ tons per acre, or 10 or 15 bushels of seed.

18. *Minerals*.—There have been no discoveries of minerals worth naming. There is considerable of what we call bog ore, some of which bears a close resemblance to iron ore, and it is said, would yield 75 per cent. probably of good iron; a sample of which I will deliver in Ashland for investigation.

19. *Mills, &c.*.—There are 36 grist mills, 57 saw mills, 10 carding machines, 5 foundries, and 1 woollen factory. This factory is situated in the heart of Ashland, and the whole superstructure, including engine and internal machinery, is entirely new and fitted up in the most skilful style; is now in complete operation; is capable of manufacturing 40,000 lbs. of wool a year; and is not to be surpassed in all Northern Ohio for the execution of neat work. And here I must add, that the proprietors, Messrs. Northrop, Reznor & Co., are entitled to much respect and patronage by the farmers of Ashland county, for this exhibition of enterprize and skill. Immediately adjoining is a splendid mill, now being erected by the same company. It will also be driven by steam; will have three run of stone, and the internal arrangements are also intended to be fitted up in complete style, and when completed in connection with the factory, will have cost \$20,000.

Report of the Joint Committee of the Senate and House of Representatives of Pennsylvania, on the publication of the Geological Surveys. Harrisburg, March 1851, pp. 16.

The delay in publishing the Geological surveys of Pennsylvania has been a matter of regret among the friends of science, and those having mining and agricultural interests throughout the state. The survey was well conducted through a series of years, and when nearly ready for publication it was stopped, whilst other states, with fewer resources, and commencing similar undertakings about the same period (or even subsequently) have given their results to the world. Thus in a geological map of the United States, Pennsylvania, with its well known wealth in coal and ores, and possessing some of the most interesting features in the geology of the country, remains a blank. We have reason to believe, from the language used by Mr. Bigham in this well written Report, that these valuable materials will be no longer kept from the citizens of the state; and when given, we hope the necessary maps, drawings, and other illustrations, will be published in full.

The following extracts from the Report, place the connexion between geology and agriculture in a clear light.

To that great leading interest *agriculture*, a geological survey is both directly and indirectly beneficial, to an extent which well deserves the careful consideration, not only of every farmer, but of the Legislature. It conduces directly to this interest by pointing out the sources from whence the various soils of the region are derived, and the belts of country where the same soils prevail, so that the agricultural experience of separate localities upon identical soils may be compared together. It analyses the strata, and shows which layers are fertilizing and which not, and traces on the geological map such as are natural manures, discriminates between the pure limestones and the magnesian ones, between those which possess the all-powerful element of phosphorus and such as do not, and indicates what shales and other constantly decomposing strata are already naturally calcareous or gypseous, and are competent of themselves, by proper mechanical treatment, to replenish the soil sufficiently with lime and plaster, and what others are destitute of these essential elements, and yield soils which require their artificial introduction. It calls attention furthermore to, and furnishes in fact much knowledge indispensable to any right system of drainage.

An improved and truly economical culture of the soil must be found upon an exact knowledge of the materials of which the soil is composed, and this indispensable knowledge can only be procured through a careful study of the rocks or strata out of which the soils are derived. Hence it is, that Geology is now universally regarded by the professional teachers, scientific writers, and the most skilful men of practice in agriculture, as equally fundamental with chemistry, in its relations to sound methods of cultivation. Of this no better proof need be asked than the titles and scope of all the treatises, both comprehensive and abridged, of one who is perhaps the ablest expounder of the principles of this great art now living, Professor James F. W. Johnston, of England, who has devoted the labors of a lifetime to the production of works expressly on "Agricultural chemistry and Geology." In a recent "Report on the agricultural capability of the Province of New Brunswick," he illustrates in various ways, how "the possession of a good geological

map is of much importance to a State, as an aid in determining the cultural value of its surface, of what it is capable, and how its capabilities are to be developed."

A little consideration of a few fundamental facts in agriculture and geology, will render obvious the advantages which the intelligent farmer may derive from a knowledge of the strata of the district where he dwells.

The first practical problem which the agriculturist in any region must study, is the adaptation of the crop to the soil, the climate, and the market. But to know its adaptability to the soil, he should have a clear conception of the nature and composition of the strata around them; for without this knowledge he can get no true insight into the chemical and mechanical properties of the soil, which is nothing else than the substance, in whole or part, of those rocks in a decomposed or decayed condition.

The whole art of preserving or improving the fertility of a soil, consists in replenishing it with those elements which the crops are ascertained to abstract, and in the proportions suitable to repair the waste, and to meet the indispensable demands of vegetation. But how can these proportions be known, unless we previously ascertain what the decomposing rocks themselves supply, and what they fail to furnish. When it is understood that a soil to be truly fertile, must consist of at least the following substances, some of them in large and some in minute quantities, and that they are all equally necessary to its productiveness, the importance of a correct geological knowledge, indicating their presence or absence in a particular locality, will be plainly perceived—*silica, alumina, lime, magnesia, oxide of iron, potash, common salt, and phosphoric acid*—and this will be still more distinctly seen when the inorganic elements in any of the ordinary crops are shown in comparison. In the case of red clover hay, as an example, there are *silica, lime, magnesia, oxide of iron, sulphuric acid, phosphoric acid, potash, soda, and chlorine*, in all one hundred and twenty-nine and a-half pounds in a ton of hay. As the abstraction from the soil of either of these ingredients will greatly impair its suitableness for this particular crop, it is manifest that it behooves the farmer, as a first step to the skilful culture of his land, to learn from the composition and geological origin of the rocks which have produced and are still producing his soil, whether these various constituents, indispensable to his purpose, are naturally there and likely to be renewed, and which of them he must himself supply.

The animal which cannot thrive without a due proportion of lime and phosphorus in its bones, can by ranging widely for its food be almost sure of those ingredients; but the plant is rooted to one spot, and if these and the other earthly elements, not less indispensable to its nutrition, are not immediately within its reach in the soil, the farmer must introduce them. But how can he possibly know what it is that is deficient, until the chemical geologist makes it clear to him, from a previous study of the composition of the rocks and of the soils into which these rocks decay.

It may be stated as an undeniable truth, that without an acquaintance with the local geology of his vicinity, the agriculturist can never avail himself of the whole of his natural resources, or make due and grateful acknowledgements in his industrial practice of the bountiful sources of wealth which the beneficent Creator, with lavish kindness, has spread beneath his feet. To till the earth and call forth her fruits, is the happy destiny assigned to the great mass of mankind, but through it there would seem to be in reserve a destiny still nobler, the cultivation of his own faculties and powers, resulting from his eagerness to convert to human uses, by increase of knowledge, the qualities of common things. In studying the very commonest of these, if they be but the crumbling clods of stone that strew his fields, he sees everywhere that the physical laws are divine appointments.

Of the indirect benefits to the agricultural class from such an exploration, little need be said, they are such as will be shared in to a greater or less extent by every citizen, and must be acknowledged as soon as hinted at. One of the most obvious of these is the operation of such a survey to render coal abundant and cheap, for the various important uses for which the farmer must have fuel, such as the burning of lime, the making of bricks, or the furnishing his neighborhood with steam, saw, and grist mills, in the absence of water power. To these advantages let us add the preservation of his wood for fencing, building, and other uses than burning, and the liberty it gives him to appropriate a large share of his land to growing *crops*, while a less share is given to growing *timber*.

But probably the most important indirect boon conferred on the agriculture of a country by geological developments, is the influence these have, by stimulating its mining activity, to attract population *inland*, and to create thereby *home markets* for the produce of the soil. Not to wander to England and Belgium for proofs, in the extraordinary pictures there presented of this quickening influence on agriculture, it is only necessary for us to look at home, to the prosperity which already smiles in the Red Shale and other vallies which begirt our anthracite coal fields, to witness the happy results of the ties which bind the welfare of the great class who till the surface, to that of the population who delve for other riches beneath it.

It is too obvious for argument that a map and description which display in their true position all the varieties of strata, and consequently their soils within our borders, must be a most valuable aid in exhibiting our agricultural means of wealth, and for inviting hither the best class of settlers. We have lost much desirable population by the undue prominence given to western lands, which do not compare so favorably with our own as to compensate for the peculiar disadvantages to which they expose emigrants from New England and from Europe. We might refer to many examples of a sudden impulse given to agriculture, by the publication of the results of geological surveys. Several striking instances are presented to our thoughts. One relates to the marl region of New Jersey, where the farms have been enriched, and their produce multiplied by the disclosures of the true character and extent of beds of green sand or marl, by Professor H. D. Rogers; and the other has reference to the old farms of Eastern Virginia, which have been revived since Professor William B. Rogers made known the abundant deposits of calcareous marl of that portion of the State. Indeed the emigration to that worn-out region from the northern and eastern states, has been excited mainly, by the prospect of benefits dependent upon the marl manures. We may also mention, that methods employed in the Netherlands, converted the most barren sands into fruitful fields. And even the white drifted sands of Cape Cod are now changing to bright green fields, and much of the credit is due to a geological report made by Professor Hitchcock, of Mass., who was ambitious to point out means to make two blades of grass, or two ears of corn grow, where but one grew before.

First biennial Report on the Geology of Alabama.

By M. Tuomey, Geologist to the State; Professor of Geology, Mineralogy, and Agricultural Chemistry in the University of Alabama. Tuscaloosa, 1850, p. 176.

We are indebted to his excellency Henry W. Collier, Governor of Alabama, for a copy of this Report, which is very creditable both to the State, and to the geologist to whom this important trust has been confided. Mr. Tuomey, was previously identified with the science of the country by his *Report on the Geology of South Carolina*, published under the authority of that state in 1848.

The survey of Alabama was placed under the charge of the professor of Geology &c., in the State University, and it was made one of the duties of the professor to spend four months in each year in exploring the state—a plan which has been recently adopted by the state of Mississippi, and which may be employed with advantage in working up the final details of the geology of the northern states, when they become sufficiently enlightened to have professors of geology and agricultural chemistry in their colleges. The expenses of the Alabama survey have been thus far paid by the university.

Eleven authors had devoted themselves to an elucidation of the geology of various parts of Alabama, previous to the regular labors of Mr. Tuomey, and one of these, Mr. T. A. Conrad, published a small map in which the great features were roughly represented. The present Report contains a good map giving a large amount of details, and showing great industry in the field work, if we take the limited time employed into consideration. The principal formations are clearly traced to the borders of Mississippi, so that with the labors of Lyell, Conrad, and de Verneuil, the investigation of the latter state will be much simplified.

Unfortunately, the Legislature of South Carolina did not sanction the publication of figures of the organic remains, although catalogues are given, as well as of the living animals of the state. But aware of the importance of a knowledge of recent species in the investigation of those fossils most nearly allied to them, Mr. Tuomey gave a list of the shells now existing upon the Carolina coast, and it is to be hoped that between the states of Alabama and Mississippi, such arrangements will be made, that the public will get a full scientific view of the relations existing between the living productions of the gulf of Mexico, and their fossil analogues in the tertiary formations somewhat like those developed by Mr. Forbes; from his dredgings in the Aegean sea. The facts developed by such means would be of the greatest scientific value, whether viewed according to the theory of Lyell, or that of Agassiz, which is diametrically opposed to it. It is hardly necessary to say that we must look to the Southern states for an investigation of these questions, because the tertiary formations have received their full development there.

Alabama is well supplied with bituminous coal, which can be delivered at Mobile by river navigation at a small expense, so that it must in time become a great source of profit, besides favoring various industrial pursuits. It is also rich in other valuable minerals.

The geological map was lithographed in New York, which is somewhat singular, as excellent work of the same kind can be executed nearer home, in the establishment of Weber in Baltimore.

Practical Mineralogy, assaying and mining &c. by Frederick Overman, Mining Engineer. Philadelphia, Lindsay and Blakiston 1851. pp. 230.

This is a useful work, the scope of which is thus explained. "It has always been the desire of the author, to place before the public the characteristics and uses of minerals in a popular style, and clothed with a popular language. For this reason he has endeavored to avoid, as far as possible, the use of any scientific and technical terms, as having a tendency to embarrass, rather than to enlighten the reader."

It is not by any means "generally agreed that granite is the oldest of the rocks." p. 14. The statement as to its "everlasting durability" must be acted upon with caution, as some apparently good granites decompose. Granite is composed of quartz, felspar, and mica, so that it is not correct to say that mica "is sometimes found to be one of its elements." When hornblend replaces the mica, the rock is *syenite*, and when the rock is composed of quartz and felspar alone, it is named *granilite*.

Manures, their composition, preparation and action upon soils; being a field companion for the farmer. By Campbell Morfit. Lindsay and Blakiston. p. 100.

A useful manual adapted from the French by a well known chemist.

The Practical Receipt Book for the manufacturer, tradesman, agriculturist, or housekeeper. Lindsay and Blakiston. pp. 360.

A large unclassified collection with many useful things, containing portions which encourage quackery and the manufacture of adulterated articles. A few medical directions for emergencies are proper, but domestic meddling with arsenic and other active medicines, and with serious diseases, is not to be recommended. Of course many of these nostrums will do as little harm as good.

The Farmer's and Planter's Encyclopedia of rural affairs; embracing all the most recent discoveries in Agricultural chemistry, etc. by Cuthbert W. Johnson, Esq., F. R. S. adapted to the United States by Gouverneur Emerson, Philadelphia. Lippincot, Grambo, & Co. 1851. pp. 1179.

This is a new edition of a large and valuable work which every farmer should have at hand as a book of constant reference, for which its alphabetical arrangement well adapts it. It is illustrated with numerous plates of domestic animals, implements, grain, weeds, noxious insects, &c.

The present edition contains a new article on soil, an extended one on ventilation, especially as regards the health and food of animals, various tables are given of the constituents of food and its money value and bearing upon the fattening of animals; and the influence of heat and cold in connexion with food is satisfactorily explained.

Another important addition entitled *American Wine making*, particularly as it is made at Cincinnati, where Mr. Longworth manufactures it so successfully that it can be brought into competition with the best foreign wines, his champagne being worth from twelve to fourteen dollars a dozen. This wine is called 'Sparkling Catawba,'

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being made of the native Catawba grape, which Messrs. Longworth and Buchanan have found to be the best adapted for wine making in this country. To arrive at this result many years were spent in experiments upon a large scale, and many thousand plants were imported from the best wine bearing regions of Europe, carefully cultivated, and finally rejected as not adapted to our climate. The cultivation of the grape and the process of wine making are detailed in this Encyclopedia.

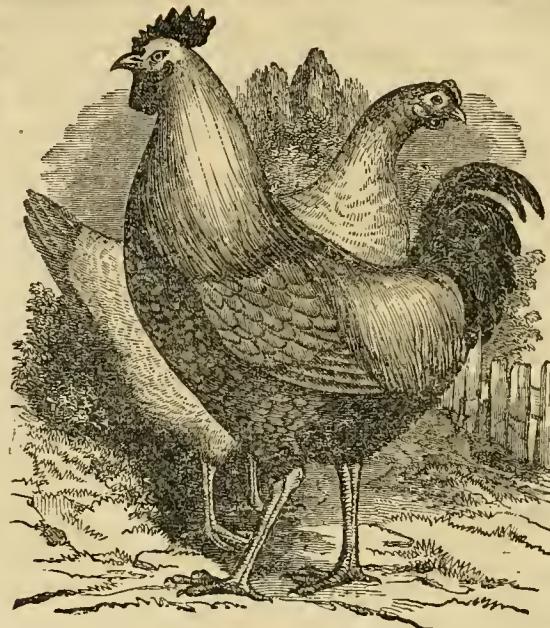
A Treatise on the History and management of ornamental and domestic Poultry. By Rev. Edmund Saul Dixon, A. M. With large additions by J. J. Kerr M. D. Illustrated with many original portraits, engraved expressly for this work. Philadelphia, E. H. Butler & Co. 1851. pp. 480.

This work enjoys a high reputation in England, and the American edition has much new matter adapting it to the present state of knowledge upon the subject in the United States. It is from the second English edition, which bears the date of February 1851, so that the author's latest additions are included.

The volume is full and practical upon rearing, management, eggs, coops, and varieties and qualities of the various breeds of chickens, and it includes accounts of the pea-fowl, pheasant, turkey, guinea-fowl, swan, geese, and ducks. The engravings are accurate, and well executed, many of them from original figures drawn by Croome from fine living American examples.

The American editor has done well to introduce figures of the wild breeds from which the domestic races of chickens have been derived; and to guarantee the authority of the originals he had drawings made from specimens in the magnificent ornithological collection of the Academy of Natural sciences of Philadelphia. He has inserted various letters from his correspondents, among whom David Taggart of Northumberland, Pa., E. R. Cope of Philadelphia, and Geo. P. Burnham of Melrose, Massachusetts, may be mentioned.

Mr. Dixon has ventured to discuss various questions relating to the origin of domestic races, and he solves one in a very summary manner by the theory that those domestic animals (and few would be excluded from this grasping generalisation) which cannot be readily referred to wild forms, are the descendants of species now extinct; whilst certain varieties are believed to have been at all times as distinct as they now are; but we are not aware that the author possesses a sufficient knowledge of technical zoology to make him a competent judge in these questions, which are now under investigation by Dr. Samuel George Morton, and the Rev. John Bachman. He does not think it necessary to give scientific names, and when he does, the adjective or trivial part of the name is improperly written with a capital letter.

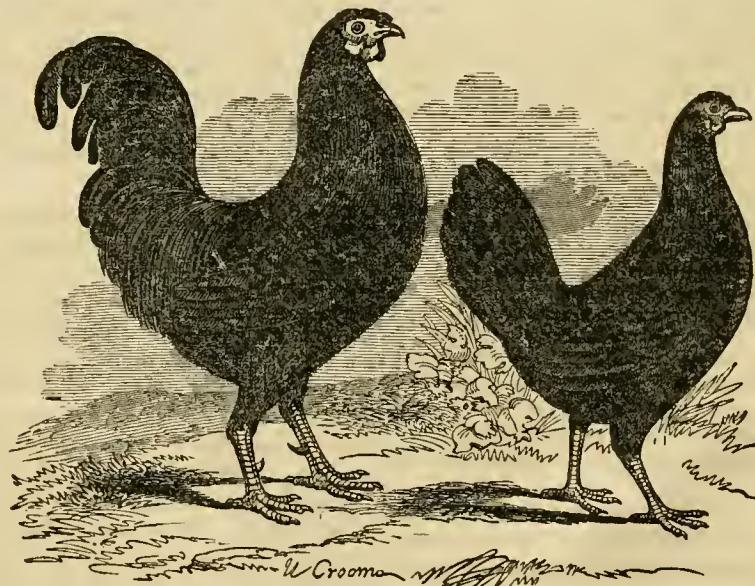


COCHIN CHINA. Imported by GEO. BURNHAM. Melrose.

Most ornithologists refer the greater part of domestic fowls to the wild Javanese *GALLUS BANKIVA*, which is considered the original of Brisson's *G. DOMESTICA*, of which the black-footed is preferred to the yellow-footed kind; *G. CRISTATUS*; *G. PUSILLUS*; *G. BANTICUS*, the *bantam* or *banty*; and *G. PUMILIO*, probably the *creepy*.

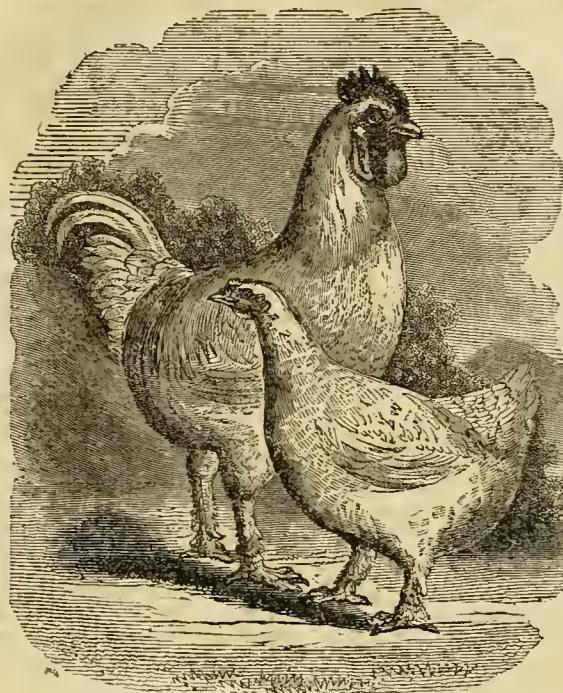
GALLUS SONERATII, a wild East Indian species was supposed to be the original of the domestic races until Temminck investigated the subject. This species has the habits of the domestic kinds.

GALLUS GIGANTEUS (the *kulm* or *jago*) is supposed to be the original of what are named *Polish* fowls in English, and in French *coq russe* (although this is not a Russian variety) *coq de Caux*, *coq de Pudoue* (*Paudua*), *coq de Rhodes*, and *coq de Perse* (*Persia*). We quote these names, (which are not given by Dixon, Browne, &c.) to enable such of our readers as are interested, to consult French works upon the subject. In fact, it frequently happens that difficulties arise in tracing domestic animals, varieties of fruit, &c., from one country to another, because sufficient attention is not always paid to get the names under which corresponding varieties are known.



GUELDERLANDS. Bred by H. L. DEVEREUX. Dedham.

GALLUS MORIO is an East India black cock once supposed to be from Mozambique. It is common in Ger-



WHITE SHANGÆS. EDEN WRIGHT, Dedham, Mass., from Stock Imported 1850.

many, and is by some referred to the ordinary domestic species. *G. JAPONICUS* (or *G. LANATUS*) is found in China, Japan, and New Guinea; *G. DENEUS* is from Sumatra; *G. CRISPUS* has frizzled feathers, and being from the warm parts of Asia, does not well endure a cold climate; *G. FURCATUS* is from Java and Sumatra; and the rumpless *G. ECAUDATUS* or bunt, inhabits the forests and plains of Ceylon.

Among the various breeds of chickens the Shangæ (the last syllable of this word is pronounced *high*) is considered the best on many accounts, being prolific in eggs, of a large size, with tender flesh. The Rev. Mr. Bumstead, of Roxborough, one of Dr. Kerr's correspondents, says:—"I hazard nothing in saying that if the farmers of Pennsylvania knew the worth of these fowls, no effort would be spared to obtain them." He states further, that one Shangæ cock and two hens will produce "more eggs in three months time, of a greater size and richer quality, than five times that number of ordinary hens will do in one year."

Most ornithologists refer the domestic goose to the wild *ANSER PALUSTRIS*, which breeds in Europe, and is known in England as the *grey lag*, a name adopted by Pennant and Montagu, and although these authors state that the legs are flesh colored, Mr. Dixon adopts the name of "grey-legged goose."

This book may be safely recommended to those who are interested in poultry, whilst its fine illustrations, mechanical execution, and useful information,

will render it an attractive volume to the general reader.

We are enabled, through the politeness of the publishers, to present our readers with several copies of the figures which illustrate the volume, but as the originals are printed as separate plates, they present a finer appearance than our impressions.

Chickens and the Curculio.

A. G. Sumner of Ravenscroft, South Carolina, in an interesting communication, gives the following as his method of guarding his fine fruit trees against the attack of the Curculio. The remedy is so simple, so effectual, and may be made so profitable that it should be universally adopted.

"For plums, apricots and nectarines, so liable to the attacks of the curculio, there is no remedy but poultry. Plant these where your poultry have a daily run amongst them. I have adopted this plan, and have not found a single tree attacked by the root-worm in my grounds. It takes more than a dozen hens and a gouty old cock to keep a few acres of these delicate trees clear of their enemies. A flock of a hundred is not too many: I find them a valuable auxiliary in manuring, as I consider domestic *hen guano*, properly tempered down, a good manure for trees the second year of their growth in the orchard. I have now twenty barrels gathered from about one hundred and fifty fowls since September last. My mode is to have the hen-house carefully scraped up once a week and packed with the underlying earth in old lime barrels, covered with a top layer of gypsum. It is practicable to save this powerful manure in the winter; but as I make my fowls resort to nature's hen-houses—the trees—in summer, the greater portion is wasted or washed away by the rains."

Scraps for the Household Matron.

Egg Pone.—Three eggs, a quart of corn flour, a large tablespoonful of fresh butter, a small tea-spoonful of salt, a half pint (or more) of milk. Beat the eggs very light, and mix them with the milk. Then stir in, gradually, the corn flour; adding the salt and butter. It must not be a batter, but a soft dough, just thick enough to be stirred well with a spoon. If too thin, add more corn flour; if too stiff, thin it with a little more milk. Beat or stir it *long and hard*. Butter a tin or iron pan. Put the mixture into it; and set the pan immediately into an oven, which must be moderately hot at first, and the heat increased afterward. A Dutch oven is best for this purpose. It should take an hour and a half or two hours, in proportion to its thickness. Send it to table hot, and cut into slices. Eat it with butter or molasses.

Poisonous Vessels.—Vessels of copper often give rise to poisoning. Though the metal undergoes but little change in a dry atmosphere, it is rusted if moisture be present, and its surface becomes covered with a green substance—carbonate or the protoxide of copper, a poisonous compound. It has sometimes happened, that a mother has, for want of knowledge, poisoned her family. Sourkraut, when permitted to stand some time in a copper vessel, has produced death in a few hours. Cooks sometimes permit pickles to remain in copper vessels, that they may acquire a rich green color, which they do by absorbing poison. Families have often been thrown into disease by eating such dainties, and may have died in some instances, without suspecting the cause. DR. THOMPSON.

How to Cure a Cold.—Of all other means of curing colds, fasting is the most effectual. Let whoever has a cold eat nothing whatever for two days, and his cold will be gone, provided he is not confined in his bed—because by taking no carbon into the system by food, but consuming that surplus which caused his disease by breath, he soon carries off his disease by removing the cause. This will be found more effectual if he adds copious water drinking to protracted fasting. By the time a person has fasted one day and night, he will experience a freedom from pain and a clearness of mind, in delightful contrast with that mental stupor and physical pain caused by colds. And how infinitely better is this method of breaking up colds, than medicines, especially, than violent poisons.

BARLEY SOUP.—3 oz. of barley; 1½ oz. of stale bread crumbs; salt, and parsley. Wash and steep the barley for 12 hours, in ½ pint of water to which a piece of carbonate of soda (the size of a pea) has been added; then pour off the water not absorbed, and add the crumbs of stale bread, 3 quarts of boiling water, and the salt. Digest these in a salt-glazed covered jar, in the oven or (boil them slowly in a well-tinned covered pan,) for from 2 to 4 hours, adding the chopped parsley and a little pepper, 30 minutes before the expiration of the time for boiling.

BARLEY WATER.—1 oz. of pearl barley and 2 pints of water. Boil the barley in the water till it is reduced to 1 pint; then strain, and sweeten, flavoring with the essence of lemon, rind of lemon, raisins, or currant jelly. Although the additions to the barley water render it more agreeable, they, however, lessen its diluent properties.—*Vegetarian Messenger.*

CHEAP OIL FOR KITCHEN LAMPS.—Let all scraps of fat bits left on the dinner plates, and all drippings be set in a cold place. Put the fat in an iron pot, filling it half-way up with fat; and pour in sufficient cold water to reach the top. Set it over the fire, and boil and skim it till the impurities are removed. Next pour the melted fat into a large broad pan of cold water, and set it away to cool. It will harden into a cake.—Then take out the cake and put it away into a cool place. When wanted for use, cut off a sufficient quantity, melt by the fire till it becomes liquid, and then fill the lamp with it, as with lard. It will give a clear, bright light, quite equal to that of lard, and better than whale oil; and it costs nothing but the trouble of preparing the fat.

WHITE-WASH.—Take two quarts of skimmed milk; two ounces of fresh-slacked lime; two pounds whiting; or the same proportions for any large quantity. Put the lime into a stone vessel, and pour upon it a sufficient quantity of milk to make a mixture resembling cream; then add the remainder of the material. When this is done, emulsify and spread the whiting on the surface of the fluid, in which it will gradually sink. It must then be well stirred, or ground, as any other paint. By the addition of any coloring matter, you may make it suit your fancy. It must be put on with a paint brush, and when dry, a second coat should be given. The quantity named, is sufficient for twenty-five square yards.

MOULDED BARLEY.—6 oz. of pearl barley, 3½ pints of water, and sugar. Steep the barley for an hour; drain it, and pour the water boiling upon it, let it stew quickly in the oven in an earthenware jar, covered, until perfectly soft, and all the water is absorbed. When about half enough, add the sugar, and essence of lemon, to the taste. Pour it into a mould, previously dipped in cold water, and let it stand to set. When boiled quickly, the above quantity requires 2½ hours, and is a much better color than when it is longer in preparation. When the barley flour is used, no steeping is required.

BEEF TEA.—Cut a pound of lean beef into thin slices, put it into three pints of cold water, set it over a gentle fire where it may become gradually warm, let it be well skimmed, cover the saucpan close, and boil gently for two hours; strain it and let it stand to settle, and then pour it off clean. One onion, a few peppercorns, and a little salt, may be added if required.

MUTTON BROTH.—Put into a two-quart saucpan one pound of mutton chops, cleared from fat, one onion, a few corns of black pepper, and three pints of cold water; let it warm gradually; when it boils, skim it, cover the pan close and set it over a gentle fire till the chops are cooked, which will be (if the meat is not too fresh,) in three-quarters of an hour.

TO MAKE LIQUID GLUE.—One quarter of a pound avoirdupois of shellac, dissolved in three ounces apothecaries' measure of naptha; put the shellac into a wide-mouthed bottle, and pour the naptha upon it; cork it up, and stir it with a piece of wire two or three times during the first 36 hours. It can be made without any measurement, by adding shellac to naptha until it becomes of the consistency of cream. When the shellac is thoroughly dissolved in naptha, it forms a liquid glue always ready for use.

Improved Breed of Cattle.

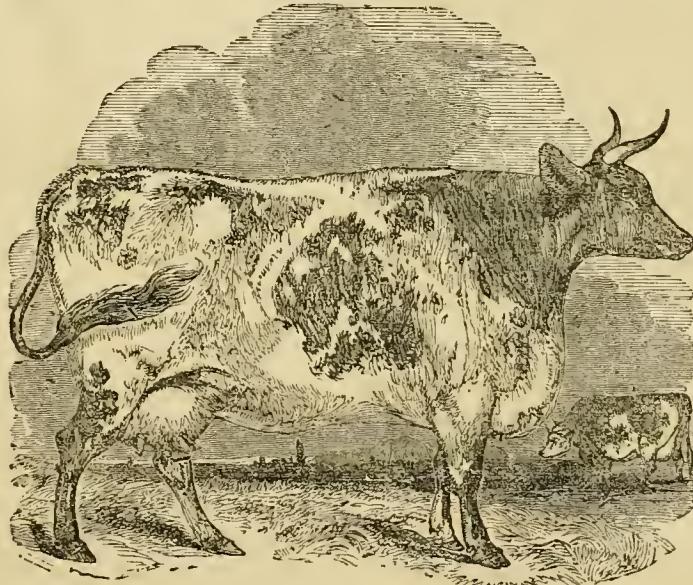
Short-Horned Cattle.

From the earliest periods the counties of Durham and York have been celebrated for their Short-horns, but principally, in the first instance on account of their reputation as extraordinary milkers. In this particular, it may be asserted, that as a breed, they have never been equalled. But, while excellent milkers, they were found to be slow feeders, and consequently slow fatteners, producing an inferior meat, not marbled or mixed with fat and lean, and in some cases the lean was found of a particularly dark hue. To retain their extraordinary milking properties, and at the same time make good fatteners of them was an object long sought, and at length found.

The Yorkshire cow, which now almost exclusively occupies the London dairies, is an unanswerable proof of the possibility of uniting the two qualities to a great degree of perfection, *but not at the same time* :—they succeed to each other, and at the periods when it suits the convenience of the dairyman that they should. Years ago the Yorkshire cow was, compared with other breeds, as great a favorite in the London market as at present. She yielded more milk, in proportion to the quantity of food consumed, than

could be obtained from any other breed; but when the dairyman had had her four or five years, she began to fall off, and he dried her and sold her. It took a long time to get much flesh upon her; and when he calculated the expense of bringing her into condition, he found that his cheapest way was to sell her for what she would fetch, and that seldom exceeded 5*l.*

By degrees, however, the more intelligent of the breeders began to find that, by cautiously adopting the principle of selection—by finding out a short-horn bull whose progeny were generally milkers, and crossing some of the old Yorkshires with him,—but still regarding the milking properties of the dam, and the usual tendency to possess these qualities in the offspring of the sire,—they could at length obtain a breed that had much of the grazing properties of the short-horn in the new breed, and retained, almost undiminished the excellencies of the old breed for the pail. Thence it has happened that many of the cows in the London dairies are as fine specimens of the improved short-horns as can possibly be produced. They do not, perhaps, yield *quite* so much milk as the old ones, but what they do yield is of better quality; and whether the dairyman keeps them a twelvemonth or longer—and this is getting more and more the habit of these people—or whether he milks them for three or four years—as soon as he dries them, they fatten as rapidly as the most celebrated of the high bred short-horns.



THE YORKSHIRE COW.

We give a fair specimen of one of these cows: the character of the Holderness and the short-horn beautifully mingling. A milch cow good for the pail as long as wanted, and then quickly got into marketable condition, should have a long and rather small head; a large-headed cow will seldom fatten or yield much milk. The eye should be bright, yet peculiarly placid and quiet in expression; the chaps thin, and the horns small. The neck should not be so thin as common opinion has given to the milch cow. It may be thin towards the head; but it must soon begin to thicken, and especially when it approaches the shoulder. The dewlap should be small; the breast, if not so wide as

in some that have an unusual disposition to fatten, yet very far from being narrow, and it should project before the legs; the chine, to a certain degree fleshy, and even inclining to fullness; the girth behind the shoulder should be deeper than it is usually found in the short-horn; the ribs should spread out wide, so as to give as round a form as possible to the carcass, and each should project farther than the preceding one to the very loins, giving, if after all the milch cow must be a little wider below than above, yet as much breadth as can possibly be afforded to the more valuable parts. She should be well formed across the hips and on the rump, and with greater length there

than the milker generally possesses, or if a little too short, not heavy. If she stands a little long on the legs, it must not be too long. The thighs somewhat thin, with a slight tendency to crookedness in the hock, or being sickle-hammed behind: the tail thick at the upper part, but tapering below; and she should have a mellow hide, and little coarse hair. Common opinion has given to her large milk-veins; and although the milk-vein has nothing to do with the udder, but conveys the blood from the fore part of the chest and sides to the inguinal vein, yet a large milk-vein certainly indicates a strongly developed vascular system—one favorable to secretion generally, and to that of the milk among the rest.

The last essential in a milch cow is the udder, rather large in proportion to the size of the animal, but not too large. It must be sufficiently capacious to contain the proper quantity of milk, but not too bulky, lest it should thicken and become loaded with fat. The skin of the udder should be thin, and free from lumps in every part of it. The teats should be of moderate size; at equal distances from each other every way; and of equal size from the udder to nearly the end, where they should run to a kind of point. When they are too large near the udder, they permit the milk to flow down too freely from the bag, and lodge in them; and when they are too broad at the extremity, the orifice is often so large that the cow cannot retain her milk after the bag begins to be full and heavy. The udder should be of nearly equal size before and behind, or, if there be any difference, it should be broader and fuller before than behind.

The quantity of milk given by some of these cows is very great. It is by no means uncommon for them, in the beginning of the summer, to yield 30 quarts a day; there are rare instances of their having given 36 quarts; but the average may be estimated at 22 or 24 quarts. It is said that this milk does not yield a proportionate quantity of butter. That their milk does not contain the same proportionate quantity of butter as that from the long-horns, the Scotch cattle of the Devons, is probably true; but we have reason to believe that the difference has been much exaggerated, and is more than compensated by the additional quantity of milk. The prejudice against them on this account was very great, and certain experiments were made, by the result of which it was made to appear that the milk of the Kyloe cow yielded double the quantity of butter that could be produced from that of the short-horn. Two ounces were obtained from the milk of the Kyloe, and one from that of the short-horn.

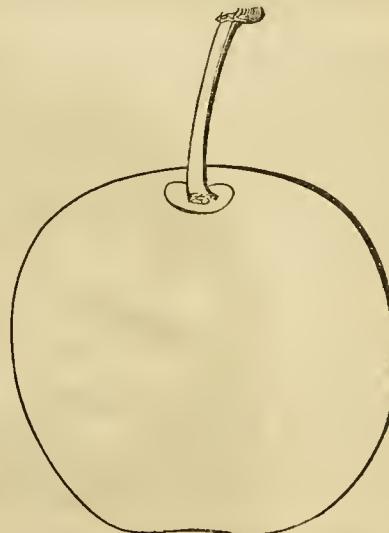
TOBACCO DUST.—*As a protection against Insects.*—We last year procured from a snuff mill a barrel of dry, but damaged snuff flour, and prepared drudging boxes, covered with a fine bolting cloth, with which we sifted it over the surfaces of any plants attacked by insects, and with most signal success. The snuff should be applied, if practicable, while the plant is wet with dew, and repeated after every shower. If the boxes are properly made, (like a common flour drudge,) and the snuff is perfectly fine and dry, but little time is necessary to go over an acre of plants. Even the rose bug, cabbage louse, thrips on grape vines, &c., all yield to the influence of snuff, and the most delicate plant of the hot-house is not injured by its application. For field vegetables, caustic lime, made into a fine powder, while dry, and applied before slaking, by contact with the air, will produce similar results.—*Prof. Mapes.*

Horticultural.

The General Hand Plum.

Mr. Editor:—I saw in the last number of the *Genesee Farmer*, a brief account of the General Hand Plum, from which it appears that there is still some doubt or obscurity about the origin and history of that beautiful fruit.

In consequence of an intimation from my friend Dr. J. K. Eshelman, of Downingtown, Chester county, Pa., that doubts as to the color of the Gen. Hand Plum, existed in the minds of some of the Pomologists of the East; some contending that it was blue, and others that it was a white fruit; I sent a few plums, taken from the tree in my yard in the early part of September, 1848, to Mr. J. A. Downing, editor of the *Horticulturist*, a very valuable periodical published in Albany, N. Y., in which may be found the following description, p. 191, vol. 3:—“It is a magnificent fruit, averaging larger, we should judge, than the Washington, and quite distinct from all other sorts. It is a roundish oval fruit, measuring from six to seven inches in circumference*; of a deep golden yellow color, with a much longer stalk than the Washington. The flavor is, we think, not equal to that of the latter fruit; but as we learn that it is a much greater bearer, its size and beauty will, no doubt, make it a popular variety.”



GENERAL HAND PLUM.

[We have procured a cut of this extraordinary Plum, a copy of which we found in the *Genesee Farmer* for April.—Ed.]

As my object in this communication is to endeavor to establish beyond a doubt, that the plum called the *Gen. Hand Plum*, first received that name in the county of Lancaster, and not in Maryland; I called on Mrs. Brien of our city, a daughter of the late Gen. Edward Hand, from whom I learned that he took great pains in collecting and cultivating choice fruit trees. She remembers his planting a number of small plum trees, but she cannot tell where he got them. Plums were very rare in this vicinity at that time. She also suggested that I might learn something further relative to the matter, by calling on Mr. Benedict, an aged and respectable citizen of our

place, who informed me yesterday, that in the autumn of 1791, he assisted in plastering the mansion house of the late Gen. Hand, on the Conestoga, about one mile S. E. of Lancaster; and he remembers that the plum trees were planted before that time; but that they were still quite small, and had not borne any fruit. He said that George Wein, procured some grafts from the tree on Gen. Hand's place, and gave Mr. George Miller, the present clerk of the Lancaster market, some of them.

I called on Mr. Miller this afternoon, and he told me that in 1810 or 1811, Mr. George Wein procured about a dozen grafts from Geo. Hand, (who was always very liberal to his neighbors in such matters,) and gave him two of them at his request—one a young shoot, the other a year old piece, with one lateral bud on it, and that one grew, but threw out no lateral branches that season. Mr. Wein was not so fortunate. None of his grew; and the following spring he applied to Mr. Miller for grafts, but declined; giving as a reason the fact that he could not cut off any grafts without spoiling his tree. During the second summer there had been some lateral branches thrown out, and Mr. Miller furnished Mr. Wein with a few of them; but he was equally unfortunate in his second attempt to propagate them. That summer the parent tree died to the ground, so that in 1812 or 1813, we find all that beautiful variety of fruit concentrated in one little stalk, grown from the lateral bud on one of the grafts given to Mr. Geo. Miller by Mr. Wein. From that circumstance, they were for a time, called the "*Miller Plum*," until Mr. Miller objected to that name, and said that it was "*Gen. Hand's plum*." From that time to the present they have been so called.

Some years afterwards, Mr. Emanuel W. Carpenter, procured some cuttings from Mr. Miller, and succeeded in propagating them, and as he told me, sent them to his brother in Ohio, Mr. Sinclair, in Baltimore, and others. Thus it appears to me, that some pomologists have improperly given Baltimore the credit of the nativity of this superb plum, which properly belongs to Lancaster county, Pa. In 1834 or 1835, I procured one "*Gen. Hand plum tree*" and a *White Prune* tree from Mr. Carpenter, and planted them in my yard, and which I afterwards paved. They both grew well and bore fruit plentifully, and I have distributed many cuttings from both varieties, as I consider them very valuable fruit. The *White Prune* tree died a few years since, and as yet I have been unable to supply its place with one of the same variety. The "*Gen. Hand plum*" tree is still quite thrifty, and has always yielded a full crop of fruit.— When fully ripe, the fruit is very mellow and juicy, from which circumstance, they do not bear the sting of insects well. I have seen large plums decay rapidly after being wounded. So rapid, indeed, was the progress of decay that by the end of the second day, after I discovered the wound, the plum would be half decayed. I think that fewer rotted last summer than usual; and more fruit ripened perfectly; which may, perhaps, be owing to our having gathered the speckled fruit every day and destroying them, thereby preventing the maturity of the ovum deposited in them.

ELI PARRY.

Lancaster, April, 1851.

SNAPPING WOOD.—Wood which proves troublesome by snapping on the fire, may be rendered harmless by turning the stick with the heart inward, when all the snapping will be toward the back of the fire.

[From the Horticulturist.]

NEW MODE OF BATTING THE PEACH WORM.

A. J. DOWNING, Esq.—I noticed some time ago, in your book on Fruits and Fruit Trees of America, an article on the subject of planting fruit trees, in which you advise that the trees should be so set in the ground as to bring the upper roots on a line with the surface of the earth. I liked the suggestion much, and in setting out a number of young plums and peach trees, I adopted it. I have, however, suffered greatly from the destructive little grub which attacks the collar or root of peach and plum trees, and had tried various means which had occurred to me as remedies such as unslacked or powdered lime, ashes, tobacco, hot lye, and pot-ash—all I found to be inefficient.— Last May I gave my trees a thorough over-hauling, or examination, and found an incalculable number of these grubs at their work of destruction and death about the collar and roots. I then tried another experiment, which I found to answer the purpose admirably, so far. It is as follows:

I commenced by removing the earth from around the roots, so as to form a circle round the tree, and make a basin of a foot in width and four inches deep. I then procured a quantity of rock lime, and slacked it, reducing it to the consistency of very thick white wash, and after letting it stand in this state for a day I poured it into this basin, completely filling up the interstices about the roots. In a short time this lime was formed into a hard crust, which served not only as an effectual *bar* to the entrance of the grub during the whole season, but what is almost equally important, I found last fall upon removing this lime from its bed, that the wounds, (and some of them were quite serious ones,) which I had inflicted on the base of the tree in removing the grubs, were healed up, and in as good and healthy condition as any part of the tree; and now my trees are in a more healthful and promising condition than they ever have been. This process of liming, however, should be renewed every spring.

I do not know whether this experiment of mine is original, but can confidently say that I never saw or heard of its having been tried before. But be this as it may, the information is before you, and if you think it will in any degree promote the interest of horticulture, it is at your service.

Very respectfully your ob't serv't
J. C. WRIGHT.

Scottville, Albemarle Co., Va., 1850.

A very good hint, and one which may be amplified and improved on.—ED. HORT.

[From the Horticulturist.]

RAISING EARLY PEAS.

The course prescribed by your correspondent in the March number, for starting peas early, is certainly a good one, and worthy of the adoption of every lover of so rich and healthful a vegetable. We have tried another plan to effect the same results, which, although it may be no better, we have no hesitancy in commanding to at least a trial. In the first place we dig a trench where we design to plant our peas, to a depth of, say six inches. This we fill two-thirds full of recent horse manure, and make it as compact as possible, which will leave a space of three or four inches between it and the surface. Over the manure, put an inch and a half of the garden earth, and sow the peas. We then take two straight edged boards and nail them together in the form of a V. This is laid, inverted, over the peas, when it is

cold enough to freeze the ground, and taken off in mild pleasant weather. They may be protected in this way until they are high enough to bush, and enjoy all the advantages of rain and sunshine where they are to grow. If the storm is heavy, they may also be protected from it, by replacing their covering.

As the spring advances, the hot and dry nature of the manure might, under ordinary circumstances, be injuriously to the plants: but this we provide against. When our peas come up, they are an inch perhaps below the surface, and the earth taken from the trench is some of it yet remaining to supply the deficiency. So when the peas are high enough, and the weather growing milder, we replace the earth until the trench is level with or higher than the adjoining surface.— This gives strength and firmness to the plants, utterly destroys all weeds which may be starting from the manure, and prevents the heat and dryness of the soil which is incident to placing hot and fermenting manures near the surface. We speak of this method which we have found in our case to be a very good one, and leave for others to adopt or reject as they choose.

Yours truly, Wm. BACON.

[From the Horticulturist.]

Planting Strawberry Beds.

If you wish the largest and finest fruit, you must make the soil *deep* and *rich*. The best manure for the strawberry, is either Poudrette, (we can recommend that of the Lodi Manufacturing Co., New York,) or decomposed stable manure. If you have these, trench the soil two feet deep, mixing in very liberal dressings of either of these manures, throughout the whole depth. Supposing, as is too often the case with beginners, that you have nothing but fresh stable manure, then, when you are trenching, bury this stable manure in the lower spit, (i. e., the lower of the two feet trenched.) To give it a good manuring, you should trench in as much stable manure as will be equal in bulk to one-third of this lower foot of earth. The reason for trenching it among the lower spit is, that it may be decomposed before the roots of the strawberries reach it. If mixed with the top spit, it would do more harm than good.

Having thus trenched and manured the soil, form it into beds three and a half feet wide. Draw three lines lengthwise through the beds, and set the young plants along these lines, about 4 inches apart. During the summer, the beds must be kept stirred with the hoe, and all runners should be cut off, that extend more than a couple of inches beyond the lines. You will thus have three rows of strawberries about ten inches apart—between which, the next season, you can lay straw or tan-bark, which will both keep down the weeds, and keep the fruit clean. This straw or tan may thereafter keep its place—the runners must be kept clipped, and a little additional straw or tan laid over the plants at the approach of winter, and removed again in the spring.

In this way—digging in a top-dressing of spent manure or poudrette between the rows every spring, your strawberry beds may be kept in good condition for four years—at the end of which time they must be abandoned, and new ones planted to take their place.

If, however, you do not wish the trouble of cultivating the plants so carefully, then plant them in the same way, and allow the runners to cover and occupy the whole bed. This they will do the same season, and the next year will give you an abundant crop—the fruit not so large as in the first case, but

perhaps rather more in quantity. But the bed will only last one year, and you must make a new one every spring, to supply the place of the old one.

As to sorts, if you are to plant but three, let them be Large Early Scarlet, Burr's New Pine, and Hoyey's Seedling. If four, add Rival Hudson; if five, Swainstone Seedling. There are many other good sorts, but this selection will probably prove most valuable to you. The *White-wood* is a nice, delicate, small fruit, and bears a long time, and is a pretty contrast in a dish of red strawberries.

Agricultural Meeting.

Lancaster County Agricultural Society.

We present the following synopsis of the proceedings of this Society, at its last meeting at the Mechanics' Institute, in Lancaster city, on the 10th of March, 1851.

Hon. A. L. Hayes, Chairman of the Delegation from the Society to the State Convention, read a report relative to the State Agricultural Society. A committee consisting of A. L. Hayes, John Miller and Dr. Eli Parry, was appointed to take into consideration the propriety of procuring an analysis of the soils of Lancaster county.

It was deemed inexpedient by the Society to hold an exhibition the present year, and a resolution to that effect was offered by Mr. Eshelman and adopted.

Mr. Baughman, moved the appointment of a committee to ascertain what inducements held out by the citizens of Lancaster, were requisite to procure the holding of the Pennsylvania State Agricultural Exhibition at Lancaster city, in October next. John Baughman, J. B. Garber, and J. H. Hershey, compose the committee, with powers to act in the premises as they may deem expedient.

An informal discussion was then had by the members, on the subject of Guano, as a fertilizer, and the mode of its application, during which some interesting facts were elicited.

The following preamble and resolutions were offered, and unanimously adopted:

Whereas, It has been represented to this Society, that our fellow citizen, A. M. Spangler, contemplates issuing a Monthly Agricultural Journal at Lancaster, to be called the "*Pennsylvania Farm Journal*."

And Whereas, It is the opinion of this Society that a Journal of this character, issued from the Agricultural County of Lancaster, would excite increased inquiry, and attract in a greater degree public attention to the cause of Agriculture in our own county and elsewhere; and as no exclusively Agricultural paper or Journal is now published in Pennsylvania. Therefore,

Resolved, That this Society hereby urge upon Mr. Spangler, the execution of his contemplated enterprise, as one in our opinion much needed in Pennsylvania, and believing that it will advance the cause of Agriculture here and throughout the entire State, hereby cordially recommend the proposed "*Farm Journal*" to the support of the members of this Society, and citizens generally of the county.

Some fine specimens of American and English pipin apples were then presented by J. H. Hershey, of West Hempfield township, for which he received the thanks of the Society.

JACOB FRANTZ, President.

D. W. PATTERSON, Secretary.

THE FARM JOURNAL.

Sub-Editor's Department.

OUR TERMS--READ THEM!

In order that the FARM JOURNAL may be placed within the reach of every one who feels interested in the progress of Agriculture, we ask attention to the following terms:—

Single Copies,	-	\$1 00	Per Annum.
Five	"	4 00	"
Ten	"	7 50	"
Twenty	"	15 00	"

It is not required that all papers in a club should be sent to one office. We will mail them (in wrappers,) to as many different offices as may be necessary. We make this arrangement in order that persons residing in different neighborhoods may unite, and form large clubs, and thus secure the "JOURNAL" at the very lowest club rates.

Specimen copies of the JOURNAL will be sent on application, *Post-paid*, to the publisher.

Post Masters, are by law, authorized to remit subscription money to the publisher, *free of postage*.—Particular attention is asked to this fact, as it will save expense both to subscribers and publisher.

Our Terms are **CASH IN ADVANCE**. The exceedingly low rate at which the Journal is furnished renders this imperative. Subscriptions may be sent at our risk, and money at par where subscribers reside, will be taken. Where the sum to be sent is large we prefer that a draft should be procured, if possible.

Subscribers and Post Masters are invited to act as Agents. A receipt will always be sent with the first number of the copy subscribed for.

All letters must be addressed, *post paid*, to the publisher.

A. M. SPANGLER,
Lancaster, Pa.

Specimen Numbers.

We shall send copies of the first number of The Farm Journal, to such persons as we are led to believe feel desirous of subscribing themselves, or of prevailing upon their friends and neighbors to do so. A very little effort on their part, will secure a great many subscribers; and we earnestly request that they will aid us in extending our circulation to every portion of the State. The terms are so favorable, that an hour's effort, rightly put forth, will secure a handsome club list, and at the same time a fair remuneration to the person getting it up.

Postage.

Letters enclosing original Communications may be sent at our expense. All other Letters must be **POST PAID**. We are compelled to require this, as our Postage Bill has already become onerous.

VOL. I.—C.

A Few Facts for the People.

The complete failure of every previous attempt to establish in Pennsylvania, a successful Agricultural paper led us to ponder long and well before engaging in the publication of The Farm Journal. We carefully investigated the causes which led to the failure of every similar attempt—we strove to ascertain the correct sentiments of the friends of Agriculture on the subject—we took counsel with kind friends whose opinions we valued, and after patient and persevering inquiry were led to believe that the day had arrived when *Pennsylvania would support an Agricultural Journal of her own*.

Under this impression, we issued our *Prospectus*, and through the kindness of the members of both branches of the Legislature, were enabled to circulate it extensively in every portion of the State. The result was all we could have desired, and more than we anticipated. Kind friends sprung up in every quarter—encouraging letters flowed in upon us—club lists were formed and forwarded to us, and many of the most intelligent, influential and devoted friends of Agriculture in the State tendered their influence in behalf of our contemplated enterprise.

With such encouragement we could no longer hesitate. The difficulties in the way have been removed, and with a confident spirit we offer the first number of

THE FARM JOURNAL

to the People of Pennsylvania, and ask for it a generous support. We appeal to Pennsylvania State Pride for encouragement. We ask that the apathy hitherto manifested in regard to our *own Journals*, may be removed, and that our farmers and friends of Agriculture generally, will come to the rescue and aid us in building up a publication, which, with proper encouragement, can, we feel confident, be made fully equal to any other in the Union. We ask that our thousands of able Agricultural writers, will give us their support, and that the contributions which hitherto, (for want of a Pennsylvania Journal) have enriched the columns of the Agricultural papers of other States, may now be given to the world through the medium of The Farm Journal.

This is asked in no spirit of selfishness, but because it is clearly apparent, that upon a compliance with this request, depends entirely, the success of our paper. If our writers will assist us, nothing shall be left undone on our part, to render the Journal worthy the confidence of the People of the Commonwealth, whose great leading interests it is intended faithfully to represent. In confirmation of this, we refer with pride to the appearance of our first number. The arrangement of the articles, it is true, is not such as was intended; the late hour at which several communications were received, having interfered with our plans. In subsequent numbers this difficulty will be

obviated, and every article will be found under its appropriate head.

In the various departments of Horticulture, Agricultural Chemistry, Geology, Botany, &c., some of our most distinguished men have kindly tendered their services, so that all these important branches will be conducted with ability.

In view of these facts, shall The Farm Journal be sustained, or shall its fate be that of every other Agricultural Journal attempted to be established in Pennsylvania? For the honor of our noble Commonwealth, and for the sake of Agriculture, we ask that it may be supported and that one and all will lend a helping hand.

To Contributors.

Our contributors will confer a special favor by sending in their communications as early in the month as possible. This is absolutely necessary, to enable us to place the different articles under their appropriate heads.

Acknowledgements.

Our Agricultural contemporaries have our thanks for the readiness with which they have complied with our request to exchange, in advance of the publication of our first number. Nearly all of them have furnished the whole of the back numbers of the present volumes, which greatly increases our obligations.

Our brethren of the Press generally, throughout the State, will accept our thanks for the flattering manner in which they have noticed our contemplated enterprise. We will cheerfully reciprocate whenever an occasion offers.

We are indebted to C. M. SAXTON, Agricultural Book Publisher, No. 123 Fulton street, New York, for a number of fine volumes, and other favors. The books will be noticed in our next.

The Beauty of the Title Page of the Cover of the Farm Journal.

As some of our contributors may feel desirous of knowing where they can have fine wood cuts executed on moderate terms, we take pleasure in referring them to Messrs. SCATTERGOOD & HOWELL, Inquirer Buildings, South 3d street, Philadelphia. The beautiful Engravings on the Cover of the Journal, as well as the Heading of our first page, were both designed and executed by these gentlemen.

To Correspondents.

S. G. of Columbia, will find his inquiries about the Paine light answered. The value of the opinion in its favor, by another eye-witness, Mr. Elizur Wright, an editor of Boston, must depend upon the value of his opinions upon other subjects; and it may possibly be found that he is as familiar with galvanism as with any other subject of study.

Proceedings of County Societies.

The Corresponding Secretaries of the different County Agricultural Societies in the State, will confer a favor by furnishing us with any matters of interest and importance, that may be transmitted from time to time. We feel desirous of rendering the Journal a faithful transcript of what is doing amongst the farmers in every section of the State.

☞ A variety of illustrations intended for this number were received too late for insertion, but they will appear next month. Among them are some figures of noxious insects, and a view and details of a Villa Farm house.

DEUTSCHER KATALOG DER GARTEN-SAMEREIEN, U. S. w:—David Landreth's garden seeds, with German and English catalogues, are to be had at No. 65 Chestnut street, Philadelphia.

Manuring.

All applications of manure, which do not look to the permanent improvement of the soil, but merely to the growth of a single crop, are wasteful. It should be the policy of all agriculturists, in applying manure, to so concentrate their efforts, as that each field should receive such a dressing, with the aid of lime, marl, or ashes, when calcareous matter may be needed, as would not only carry it through a course of rotation, but leave the land at the end of such rotation in an improving condition. This may involve a necessity for decreasing the area of cultivation, but that should not interrupt the system which we commend, as less than one-half the land, if well manured, would increase the quantity of product, at a great reduction of labor, and improve the ability of proprietors to carry on and extend their efforts at melioration, until the whole of their arable lands were permanently improved. All fields improved on this plan, must necessarily, be got into clover, or grass, at the earliest possible period after the application of the manure, in order that, at the end of the rotation, a body of vegetable matter may be upon the soil, ready to be turned in at the commencement of the succeeding line, to supply the place of the abstracted portion of the nutrient principles afforded by the manure applied previously. And it may be well here to impress these facts upon our readers:—Lime, marl, or ashes, must lie at the foundation of every improvement of the soil looking to permanency;—Every soil requires mould to make it productive, as without the presence of mould, or the materials for its formation, the effects of lime, marl, and ashes, must be circumscribed as neither contains the principles of nutritive manure, which we maintain are essential to the perfection of every plant grown by man:—The food of plants must consist of *organic*, as well as *inorganic* substances, or a high state of productiveness cannot be expected. If we reflect, that what is termed the organic part of a plant, comprises about 97 parts of the 100 which forms its whole, and that these parts are not to be found in mineral bodies, but partly in the atmosphere, and more in putrescent manures, the necessity for keeping up a full supply of mould in the soil, will appear obvious to all reflecting, well judging minds.

Miscellaneous.

Action and method of using Guano.

In answer to the inquiries of our friend of "Notley Hall," Va., in regard to the action of Guano on "poor worn-out land," we have to reply; that, on such lands its action should be most manifest—most beneficial—containing as it does, in a state to be availed of, those substances which plants need, which such land is mostly deficient in, and without a supply of which, they cannot grow in luxuriance and perfection. The non-action of the guano upon all the kinds of vegetables, with the exception of one to which he applied it, arose no doubt from the cause assigned by our observant friend, viz: the drought of the summer. Guano, like all other kindred manures, requires moisture to bring out its virtues; nor can the plants avail themselves of any food which may be in the ground, no matter how good and congenial it may be, until that food, through the agency of water, be reduced to a liquid, or gaseous form, as it is one or the other of these forms which imparts to the rootlets of plants the power of feeding.

With regard to the mode of using guano, we give it as our *opinion*, which we advanced from the beginning, and have never seen any cause to change it, that Guano never should be applied without being mixed with Plaster, to *fix* and prevent the escape and waste of its ammoniacal constituents. Before being used, 25 lbs. of Plaster should be mixed with every 100 lbs. of Guano. This mixture should be *broadcasted* over the ground and ploughed, or spaded in. We believe that any manure of the concentrated nature of guano, abounding as it does in the elements of ammonia in almost every state, can but rarely be used safely, except as a broadcast dressing, and that it cannot advantageously be used in the hill or drill, except when mixed with a large proportion, say twenty to one, of mould or some other substance of similar nature, and even then, that such compost should be placed so deep as that the seed, setts, or plants should not come in *immediate* contact with it.

If we were going to apply it to potatoes in the hill, if we did not use it composted with a large body of mould as above, we would use it thus—after mixing the guano with plaster, we would strew the mixture on the bottom of the furrow or drill, and then cover that with an inch or so of wood's-mould, or other kindred substance, and upon this plant the potato setts, and cover the whole over.

In using it on watermelon hills, we would act thus: at the point for forming the hill, we would make a hole with the hoe, there deposit the mixture of guano and plaster, mix it in with the earth, and raise the hill upon it from the surrounding mould, or we would mix 200 lbs. of Guano with 50 lbs. of plaster, and then compost it with 3 loads of wood's-mould, marsh mud, or like substance, place a shovelfull at the bottom of every hill we might raise. By either of these modes the vines would derive all the benefit from the virtues of the guano, without any injury. The volatile portions would ascend and feed the rootlets of the melon plants, while the roots would descend and feast upon those of the constituent elements of guano that are not volatile.

A solution of guano might be made in the proportion of 1 lb. of Guano, and 10 gallons of water, with which the melon plants might be very advantageously watered in times of drought. Such a solution would prove doubly useful, first, in protecting the vines from the effects of drought, and secondly, by afford-

ing to them direct food—food of a nature adapted to their wants, as the water would decompose the ammonia of the guano, deprive it of the power of harm, and prepare it to be taken up as pabulum.

We will add another remark, in order to answer a question from another quarter. We believe the best way to apply guano to tobacco, is to sow it broadcast over the ground and plough it in—and that, if applied to the hill, it should be mixed with one-fourth its weight of plaster, and for every 100 lbs. composted with it. In Peru, guano is applied to the crops at each time of working; but all such applications are followed by immediate irrigation; the water of which, by decomposing the ammonia of the manure, prevents all resulting injury, and ensures benefit to the growing plants.

Where a wheat crop is to follow the tobacco, we would, by all means broadcast and plough the guano in. If treated to plaster and ploughed in, we have no question but that the good effects of the guano would be visible during the ordinary period of a rotation.—*American Farmer.*

BUTTER.—By the census returns of five counties adjoining Philadelphia, it appears that they produced, in 1850, 11,383,182 pounds of butter. The average price of butter in the Philadelphia market, on which these counties supply, is about 20 cents per pound. The money value therefore of this single product is over two millions and a quarter of dollars, (\$2,276,636.) A good dairy, well and economically managed, cannot but be profitable in the neighborhood of the city, at the prices which butter, cheese and milk always command in our markets.

PRUNING STONE FRUIT TREES.—It has been but a few years since the cultivators of fruit have been in habit of pruning peach trees at the extremities of the branches, instead of cutting off limbs at the trunk. This system of shortening-in, as it is called, is gaining ground, and it is a great improvement. The reasons for this mode of pruning are evident on examination. Most kinds of stone fruit grow rapidly, and bear the greater part of their on new wood, which is, of course, near the ends of the limbs. In this way a tree spreads over much land, and naked branches near the trunk; and pruning at the trunk causes the gum to ooze out, which sometimes endangers the health of the tree.

On the contrary, by pruning at the ends of the branches, the tree is confined to a small space, the wounds have no unfavorable effect, or only affect the twigs, and not the trunk, and much new wood is produced for the production of fruit.

TO BAKE A HAM.—Unless when too salt, from not being sufficiently soaked, a ham (particularly a young and fresh one) eats much better baked than boiled, and remains longer good. The safer plan is to lay it into plenty of cold water over night. The following day soak it for an hour or more in warm water, wash it delicately clean, trim smoothly off all rusty parts, and lay it with the rind downwards into a coarse paste rolled to about an inch thick; moisten the edges, pinch them together, and fold them over on the upper side of the ham, taking care to close them so that no gravy can escape. Send it to a well-heated, but not a fierce oven. A very small ham will require quite three hours baking, and a large one five. The crust and the skin must be removed while it is hot. When part only of a ham is dressed, this mode is better than boiling.

CULTURE OF CELERY.—For early use it should be started in hot-beds; but for later use, it may be sown out in April. When the plants are of suitable size, transplant into a rich deep soil. Set in trenches $2\frac{1}{2}$ feet apart, and 15 inches deep. Put a few inches of mellow manure into the bottom of the trench, and as much good loam, and mix intimately together. Set the plants six inches apart. If convenient take up a ball of earth with each, and transplant in the evening, or in damp weather. Stir the soil frequently, and as the plants grow, earth up gradually, until the trench is nearly filled, leaving only a small depression to catch the water.

Agents.

THE FARM JOURNAL may be had at the following places:—

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and of Booksellers generally.

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Pear and Quince, Cherry on Mahaleb, and Apple on Paradise stocks—for Pyramids or Dwarfs for garden culture, and embraces all the kinds that succeed on those stocks.

Deciduous and Evergreen Ornamental Trees and Shrubs.

100,000 Deciduous and Evergreen Ornamental Trees, embracing all the well known kinds suitable for street planting of *extra size*; such as Sugar and Silver Maple, Chinese Ailanthus, Horse Chestnut, Catalpa, European and American Ash, Three Throned Acacia, Kentucky Coffee Tree, Silver Abele Tree, American and European Basswood or Linden, American and European Elm, in several varieties, &c. Also all the more rare and select, as well as well known kinds suitable for Arboreta. Lawns and door-yard plantings, &c.; such as Dodcar and Lebanon Cedars; Araucaria or Chilean Pine; Cryptomeria japonica; the different varieties of Pines, Firs, Spruces, Yews, Arborvitæ, &c.

WEEPING TREES.—New Weeping Ash. (*Fraxinus lentiscifolia pendula*) the Old Weeping Ash. Weeping Japanese Sophora, Weeping Elms, (of sorts) Umbrella Headed Locust, Weeping Mountain Ash, Weeping Beech, &c., &c.; together with every variety of rare Maple, Native, and Foreign; Flowering Peach, Almond and Cherry; Chestnuts, Spanish and American; Tom and Copper Beech; Judas Tree, Larch, Gum Tree, Tulip Tree, Osage Orange, Paulownia, Mountain Ash. (American and European) Magnolias of sorts, with many other things—including some 200 varieties of Shrubs, Vines, &c., for which see Catalogue, a new edition of which is just issued, and will be forwarded to all post paid applicants.

A large quantity of *Arborvitæ* for Screens, and Buckthorn and Osage for Hedge plants.

The above will be sold on as liberal terms as similar stock can be purchased elsewhere. For further particulars we would again refer to priced Catalogue. A liberal discount will be made to persons who buy, to sell again, and extensive planters, on their own account.

April

Heinitsh's German Cattle Powder.

THIS Powder is celebrated for the cure and prevention of all diseases to which Cattle, Milch Cows, Sheep and Pigs are subject, and is the only preparation upon which full confidence can be placed. For Milch Cows it is of the greatest importance, wonderfully increasing the quantity and quality of their milk, and will effectually prevent and cure Hollow Horn, Murrain, &c.



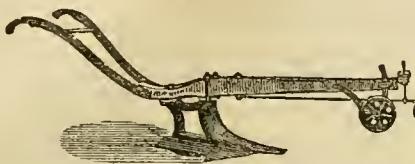
VEGETABLE HORSE-POWDER.

Which will cure Distemper, Hellebore, Loss of Appetite, Founder, Yellow Water, Lowness of Spirits, Inward Sprains, Inflammation and Heat in the System, and all other diseases to which Horses are subject.

HORSE EMBROCATION.—For the cure of external injuries, as Wounds, Bruises, Cuts, Rubbing of the Saddle, Collar or Harness, Stiffness in the Joints, Swellings, Sweeny, &c. Prepared and sold at

CHARLES A. HEINITSH'S,
Medicinal, Drng and Chemical Store, No. 13 East King st.,
April—11 Lancaster.

The Great Michigan Sod and Sub-Soil PLOW.



THIS Plow, in the language of the Report of Committee on the great trial of Plows in June last, appointed by the New York State Agricultural Society, (by whom it was awarded a SPECIAL PREMIUM): "We regard this implement as a *most useful present* from the mechanic to the farmer, and in our opinion will effect a great improvement in the tillage of land. It *pulverizes the soil* in an excellent manner, which, to be fully appreciated, must be seen; and it accomplishes this pulverization with an amount of power which, in reference to the work performed, is certainly not large. It *buries the sod completely*, and covers it with a coating of loose earth which makes a seed bed almost as perfectly as a spade."

At Boston, last season, this Plow was awarded a GOLD MEDAL, and at every County Fair in the State of New York, at which it was exhibited, the Proprietor received a Premium.

Manufactured and for sale by HENRY GILBERT,
HARRISBURG, Pa.

All orders from a distance promptly attended to. [April-1t]

NEW YORK Agricultural Warehouse & Seed Store, 189 and 191 Water Street.

THIS is by far the most extensive establishment in New York. It occupies nearly the whole of three large five-story stores, and contains a varied and complete assortment of every description of Agricultural and Horticultural Implements, and Field and Garden Seeds required in the United States. We have upward of One Hundred of the latest improved kinds of Plows, mostly manufactured by us expressly for the different States of the Union, California and Oregon, the British Provinces, the West India Islands, Mexico, and South America. Also Harrows, Roters, Seed Sowers, Cultivators, Horse Powers, Threshers, Coru Shellers, Reaping and Mowing Machines, Hay, Cotton, Tobacco, Oil, and Dry Good Presses, Brick Machines, Shovels, Spades, Hoes, Manure and Hay Forks, &c., &c.

Garden Implements.—These are imported by us direct from the English manufacturers, or made here to our order. They consist of a great variety of the choicest kinds such as Trenching and Weeding Forks, Pruning and Hedge Shears, Flower and Twig Cutters, &c. The assortment for ladies is particularly choice and well selected.

Field and Garden Seeds.—These are grown expressly for us, both in Europe and this country. They are of the choicest kinds, and of great variety. We also obtain, as soon as sufficiently tried and well approved, every new kind of seed suitable to be cultivated in the United States.

Fertilizers.—Peruvian and Patagonian Guano, Bonedust, Pond-rette, Plaster of Paris, &c.

Manufactory of Agricultural Implements.—We have a large manufacturing establishment in this city, where we will promptly make to order any new article or implement required by the Farmer or Planter.

Excelsior Sand Paper.—A new and very superior kind, of the different numbers in use by Machinists, Cabinet Makers, &c.

The American Agriculturist, a monthly publication of 32 pages. Price one dollar a year. A. B. ALLEN & CO.,

189 and 191 Water-street. New York.

**IMPORTANT TO
Farmers & Threshing Machine Makers**
THE subscriber respectfully begs leave to inform the public that he has lately perfected a new THRESHING MACHINE AND HORSE POWER, which in point of strength, durability, lightness of draft and convenience in moving, is not surpassed or equalled by any machine in the United States. He also confidently affirms that no machine of its strength and durability can be afforded as low. The invention of this machine has been the result of several years experience and hard study. We do not claim to have discovered any new principle in philosophy, but we do claim to have discovered a plan by which old philosophical principles are more correctly and advantageously applied than on any other machine. The invention is secured by a caveat.

These Machines can be had at ISRAEL W. GAFFER'S Machine Shop, at retail or by wholesale, on the most reasonable terms.

The Power weighs 600 pounds. It is made entirely of Iron with steel journals, and is warranted to hold 8 horses, should it at any time be necessary to use so many. From 2 to 4 are a sufficient number for common threshing. We are about getting up one much lighter for shop purposes, that will be the cheapest and most convenient thing in use; it might also be used with two or three horses for threshing. The Powers and cylinder and concave, can be had by the Machine makers throughout the country, on the most reasonable terms.

All orders directed to the subscriber, at Lancaster city, will be thankfully received and promptly attended to.

SAMUEL FELTON, Jr.

April, 1851.

tf

\$500 to \$2,000 a Year.

1000 AGENTS WANTED.

IN all the States of the Union, to canvass for the following Impertinent and Valuable Works, which are sold by subscription. We have now about two hundred Agents in the field, many of them clearing from TWO TO EIGHT DOLLARS PER DAY. It will be seen that they are all of a very popular and desirable kind, and calculated to please almost every taste. For further particulars apply (post paid) to the publishers.

DERBY & MILLER.

Auburn, N. Y.

"HOW A FARMER MAY BECOME RICH."

BLAKE'S FARMER'S EVERY DAY BOOK, Or, how a Farmer can become Rich—being sketches of Life in the Country; with the Popular Elements of practical and theoretical Agriculture, and twelve hundred Limericks and Aphorisms relating to Morals, Regime and general Literature; also 500 Receipts on Health, Cookery and Domestic Economy; with 10 fine illustrations respecting the various scenes attendant upon farming, etc. By John L. Blake, D. D., author of "Biographical Dictionary," "Family Encyclopedia," &c.

The publishers respectfully announce, that they have undertaken the publication of this large and beautiful work, with a view to supply a desideratum that has long been felt—a book for EVER FARMER'S LIBRARY; believing that the venerable author has produced a work that will be worth its weight in gold to every farmer's family that thoroughly peruse it. It is proper to state that Dr. Blake is a PRACTICAL FARMER, and has reclaimed a sterile and worn out piece of land into a valuable and productive farm—which experience, with his well known qualifications as an author, peculiarly fit him to prepare a book for farmers.

The work contains 654 pages, large octavo, with a motto surrounding each page—is printed on fine paper, and bound in substantial imitation Turkey Morocco, gilt back. Invariable retail price, \$3.00.

Agents wanted to canvass for the above.

FROST'S PICTORIAL HISTORY OF CALIFORNIA.

The History of the State of California, from the earliest period of her conquest by the Spaniards, to her acquisition by the United States; with an account of the discovery of the immense Gold Mines, and the quantity of Gold already obtained; the enormous increase of population; a description of the mineral and agricultural resources of the country; with adventures and travels among the Mines. Also, advice to Emigrants, as to the most desirable routes thither. To which is added the Constitution of the State of California; with numerous illustrations, and a map of California and the Gold Mines; in one octavo volume, 500 pages; bound in same style as Mexican War. Retail price, \$2.50.

"I am prepared—I have endeavored to do my duty."

THE LIFE OF ZACHARY TAYLOR,

Late President of the United States, including the closing scenes of his life and death. By H. Moutgomery. Embellished with a steel portrait and 15 illustrations; in one elegant octavo volume, 463 pages, well printed on fine paper, and bound in substantial morocco, gilt back.

The lightnings may flash, the thunders may rattle,
He hears not, he feels not, he's free from all pain,
He sleeps his last sleep, he has fought his last battle,
No sound can awake him to glory again.

More than 20,000 copies of the above work have been sold by us, and the demand is unabated. It is allowed by critics to be the most complete and authentic copy of any of the works purporting to be a Life of the Great Man of the Age. Retail price, \$2.00.

A COMPLETE HISTORY OF THE WAR BETWEEN THE UNITED STATES AND MEXICO,

From the commencement of the battles, to the ratification of the Treaty of Peace; containing a concise account of the splendid military achievements and glorious victories of the American Army under Generals Taylor and Scott, and their gallant compatriots in arms. Also, a concise account of the new El Doradon, the Golden Land of California, which was annexed to the United States by the treaty of peace. Illustrated with 24 portraits and battle scenes, and a steel likeness of General Taylor. By John S. Jenkins, author of "The Life of Silas Wright," "Lives of American Generals," etc., etc. The work is bound in elegant and substantial morocco, gilt back, and contains 526 pages. A fine Map of Mexico and California accompanies each book.

* 12,000 copies of the above work have been sold by us, chiefly in N. Y. State. It is pronounced by critics as the only complete and impartial history of the war extant. Subscription price \$2.50. April

SCATTERGOOD & HOWELL, DESIGNING, DRAWING

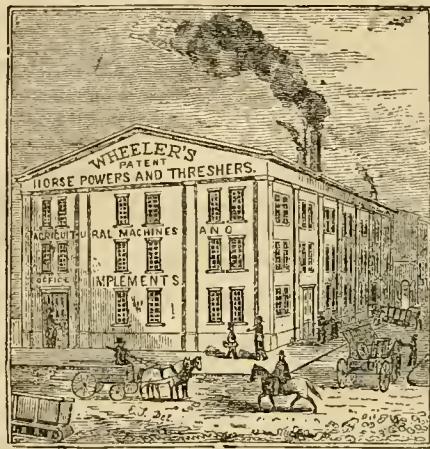
And Wood Engraving Establishment,

*Inquirer Building, Third Street, below Chestnut st.,
PHILADELPHIA.*

WATER COLOR DRAWING, PORTRAITS, BUILDINGS, MACHINERY, NEWS PAPER HEADS, LABELS, SEALS, &c. DRAWN and ENGRAVED in the BEST manner and on the most reasonable Terms.

April-1t

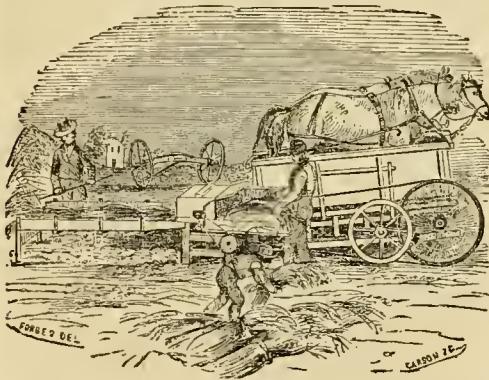
New York State Agricultural Works.



Agricultural Machines and Implements.

WHEELER, MELICK & CO.,

CONTINUE their manufactory at the corner of Liberty and Hamilton streets, ALBANY, where they are prepared to fill all orders with despatch.



ORDERS FOR

Wheeler's Patent Railway, Chain Horse Powers, and Overshot Threshers and Separators, will receive their prompt attention.

The large and increasing demand for these Machines has induced the Proprietors to erect a New and Spacious Manufactury, and otherwise extend their means of promptly filling orders.—Their Powers and Threshers have been sold in nearly every State in the Union, during the past year, and their superiority has been acknowledged by numerous testimonials, not only from Agricultural Societies but from persons who have used them. They have been awarded the First Premiums at all the principal Fairs where they have been exhibited in operation, including the Pennsylvania State Fair, the Provincial Fair of Upper Canada, and the Michigan and Ohio State Fairs, together with numerous County Exhibitions in the different States.

The TWO HORSE MACHINE, with from three to five hands, will thresh from 125 to 200 bushels of Wheat per day, or twice that quantity of Oats.

The One Horse Machine will thresh rather more than half that quantity.

PRICE AT ALBANY:

For Two Horse Machines. \$145 00
For One Horse. \$120 00

Machines will be shipped to order to any part of the United States or the Canadas, ~~and~~ and warranted to give satisfaction to the purchaser, or they may be returned within sixty days.

The subscribers also manufacture and will furnish to order the most approved kinds of

Feed Cutters, Clover Hullers, Circular Saw Mills, &c.

They will also furnish Horse Powers properly Geared for driving Churns, Elevating Grain, or other purposes to which Horse Power can be applied.

WHEELER, MELICK & CO.,

April—2^d Corner of Hamilton and Liberty sts., Albany, N. Y.

Kettlewell & Davison's Salts against Guano.

A CHALLENGE!!!

THE deep interest now taken by Agriculturists in all descriptions of manure, would seem to justify any expedient, by which fair and unprejudiced experiments may be made of the various descriptions of manure at this time attracting the attention of the public. In view of this, and the undersigned honestly believing that the Chemical Compound, manufactured by them, is the best manure of which any knowledge is had for a *Corn Crop*; challenge Guano to the test upon the following condition:—He will forfeit *One Hundred Dollars*, to be presented to the Maryland Agricultural Society, if any advocate of Guano will do the same, that the Renovator compounded by Kettlewell & Davison, will produce upon any soil, the largest crop of *weighed* corn, without regard to the size of the stalk, provided the President of the State Agricultural Society will select some person, in his judgment qualified, to superintend the experiment. The texture of the soil to be described, so that each party can direct the mode of application: two barrels of the Salts to be used per acre, costing \$6, and 360 lbs. of the Guano, costing \$7 20, the party making the experiment to receive the manure free of cost. And the same amount against any manure as a top dressing upon timothy or clover.

JOHN KETTLEWELL.

Kettlewell & Davison again call the attention of Agriculturists to their various Chemical Manures—and in so doing, they would be insensible to common gratitude, if they failed to express their profound acknowledgments for the constant and increasing demand, which flows in upon them for their simple and compound manures. Each season has greatly increased their sales, extending as far south as South Carolina.

They can give no stronger evidence of their faith in the virtues of their manure, as the best known for a *corn crop*, than the tenders they make above; and the certificates which they herewith present. In the offer of a test, it is not the amount involved, but the willingness to challenge result, that speaks their integrity and confidence. We could add any amount to the testimony we publish; but if the names we refer to, do not command confidence, no additional number could. We have never boasted of the quality of our article, we have been content to leave a decision to time, demand and experiment, that has been in our favor—hoping, if we have less of "Bi-phosphates," the public would discover it, as they would if it was found we had more of "sand" than any thing else.

KETTLEWELL & DAVISON.

Office at Ober & McConkey's, corner of Lombard and Hanover Streets. Factory, Federal Hill.

BI-PHOSPHATES.

We keep constantly on hand this valuable manure. Bones, with a proper portion of the Sulphate of Ammonia, dissolved in Sulphuric Acid. The Chemists of this country and Europe have been pressing this mode of using bone-dust upon the attention of farmers, with great zeal and ability of recent years. Every experiment has confirmed the truthfulness of their theory; and we hazard but little in saying that in a very brief time it will be used in no other way. It is prepared so as to be sown similar to the salts, at the rate of one or two barrels to the acre—The price of this article is \$4 per barrel. Let the farmer who doubts, try it at a less expense than the old mode of using bone-dust.

TOBACCO GENERATOR.

This is a chemical compound, made expressly for the growth of the Tobacco plant. We will call more special attention to it at the proper season.

CHEMICAL RESIDUUMS.

We have constantly on hand Chemical Residuums of every description. Full information of which can be had by application to us.

COMBINATION OF GROUND PLASTER AND POTASH.

This is a preparation made for soil deficient in Potash, of which deficiency there is unfortunately, too many instances in much of our Maryland land. For this compound we are indebted to the suggestion of an accomplished Agriculturist of Prince George's county, who may at some future day present the result of his experiment. The price of this is \$2 50 per barrel.

DIRECTIONS.

The mode of using the Renovator is simple, inexpensive, and requiring but little labor. The farmer must bear in mind, that in the preparation of his soil he shares an equal responsibility in testing the merits of any manure. Land negligently or badly cultivated gives no manure a fair chance. How to put land in order he ought to know better than we can teach him; and if he doesn't know, should learn as speedily as possible. The land, then, in order—if one barrel to the acre is used—and this quantity depends upon the quality of the land—it should, for grain be sown broad cast, and slightly harrowed in.

If two barrels are used, one as stated above, and the other as a top-dressing upon the wheat or rye, early in the spring at the commencement of the first thaw. Upon grass it should be sown broad-cast upon the timothy or clover. On corn, either broad-cast or in the hill. Where two barrels are used, one each way.

PRICE of the RENOVATOR, \$20 PER TON, or \$8 PER BARREL.

April—1st

PENNSYLVANIA FARM JOURNAL

VOL. 1.

LANCASTER, MAY, 1851.

NO. 2.

THE FARM JOURNAL.

S. S. HALDEMAN, Editor.

Entomology, No. 1.

BY THE EDITOR.

Entomology, or the study of insects, is interesting on account of the vast number of species and individuals, and the great variations exhibited in their structure and habits. Some are predaceous, living upon other insects; some feeding upon decaying animal matter, and others upon decaying vegetables, these acting as scavengers to remove offensive matter. But the greater part live at the expense of vegetables, various species attacking every part, from the root to the seed.

It is chiefly with the last that the farmer, gardener, and forester are concerned, and in Europe the subject has been deemed of sufficient importance to call for national aid in making investigations and publishing histories of insects in their relations to man.

It is sometimes difficult to tell what insects are hurtful and what beneficial, and in some cases a species which was the destroyer of the real enemy has been mistaken for the cause of the mischief. Even when a destructive larva is seen, the perfect insect which comes from it may not be the species which the larva should have produced, because the natural enemies of some insert their eggs in the flesh of the latter, upon which their young feed. The attacked larva, before it dies, is often able to form a cocoon, and from this the parasite makes its appearance.—For these and similar reasons it is necessary to have some knowledge of entomology to enable us to guard against the insects likely to injure us.

We intend to give an account of various insects in a series of articles of which this is the first, and altho the history of some of them may seem to have no practical application, it must be remembered that a knowledge of any species may throw light upon others, and afford hints for their proper investigation. Most general works on natural science published in this country are devoted to foreign species which tho

reader may never be able to see, whilst the commonest American kinds are unrepresented. To remedy this defect, we have determined to give figures illustrative of American species and habits, taken from the specimens themselves.

ELAPHIDION PUTATOR.—This is a small coleopter (an insect with the true wings generally protected by hard wing covers or *elytra*) of a brown color, with pale



FIG. 1.

scattered spots. The antennæ are as long as the body in the female, and longer in the male. The larva lives in the small branches (generally in the centre,) of oak, hickory and chestnut, forming a flattened perforation some inches in length. The larva is a soft whitish grub, with stout black jaws, and when it has attained its full size (about the end of summer) it cuts the branch from the tree by a transverse cut, leaving the bark entire. The storms of the fall and the winter cause the branch to fall with its tenant, but previously to this, it has nicely closed the end of its perforation with a plug made of shreds of wood and sufficiently close to exclude water.

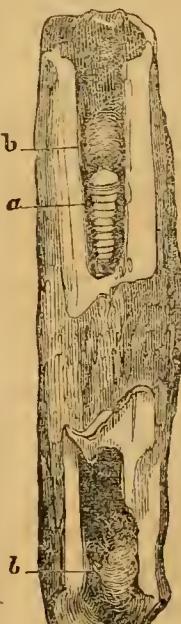


FIG. 2.

The annexed figure (2) represents a fragment of a branch of shellbark hickory which was probably cut off by a different species, at both ends, with a plug (b) in each. It is cut open to exhibit the larva, which is represented at (a). It has the anterior end large, somewhat as in the larva of *BUPRESTIS*. This

enlargement disappears just before it changes to the pupa state, and most of the specimens are found in this condition about the middle of April in Pennsylvania. The larva has three pairs of minute feet which assists it in moving along its burrow.

The fragments of wood which it inhabits are from two to four inches long and the part to which it confines itself when it closes the ends, is usually two or three inches in length. The pluses are usually inserted at the ends, altho' they are sometimes half an inch from them. The fragments cut off vary in thickness

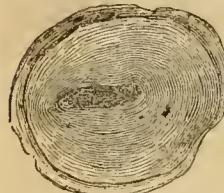


FIG. 3.

from the fourth of an inch to an inch, and figure 3 exhibits an end view of a thick one. The mandibles of the *imago* or perfect insect are sufficiently strong to enable it to eat its way out of the prison it had constructed for itself.

ONCIDERES CINGULATUS. This insect was first described by Say in the Journal of the Academy of Natural Sciences, vol. 5 p. 272, 1825, and its habits were discovered by us and published in our "Materials towards a History of the Coleoptera longicornia of the United States;" Am. Phil. Trans. vol. 10, p. 52, 1837.

In our walks through the forest our attention was frequently drawn to the branches and main shoot of young hickory trees (*CARYA ALBA*) which were girdled with a deep notch in such a manner as to induce an observer to believe that the object in view was to kill the branch beyond the notch; and extraordinary as it may appear, this is actually the fact, and the operator is an insect whose instinct was implanted by the Almighty power which created it, and under such circumstances that it could never have been acquired as a habit. The knowledge of girdling is unknown to the insect, whose life is too short to perceive its effects and to foresee the necessities of its progeny during the succeeding season.

This insect may be seen in Pennsylvania during the two last weeks in August and the first week in September feeding upon the bark of the tender branches of the young hickories. Both sexes are rather rare, particularly the male, which is rather smaller than the female, but with longer antennae.

The female makes perforations in the branches of the tree upon which she lives, which are from half an inch to less than a quarter of an inch thick, in which she deposits her eggs; she then proceeds to

gnaw a groove of about a tenth of an inch wide and deep, around the branch, and below the place where the eggs are deposited, so that the exterior portion dies and the larva feed upon the dead wood, a food which is essential to many insects altho' but few have the means of providing it for themselves or their progeny by an instinct so remarkable.

Were this insect abundant, it would cause much damage to young forests of hoop-poles by the destruction of the principal shoot. We have known insects which from their rarity, could hardly be regarded as "noxious," increase to such an extent as to be very destructive, and the locust trees (*ROBINIA PSEUDACACIA*) have had their foliage withered during the few last summers from such a cause. Should the insect in question increase so as to become troublesome, the infected branches should be cut off in July and burnt.

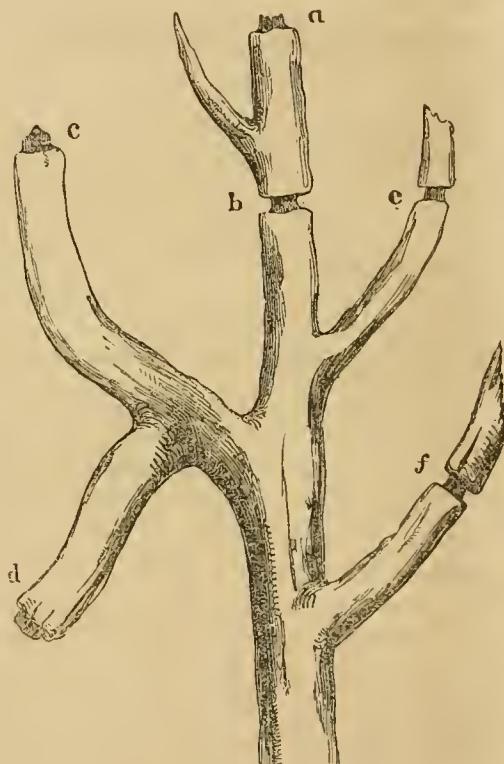


FIG. 5

is a slightly modified representation of the top of a hickory tree, from a specimen now before us, which presents the unusual number of six girdlings, which were probably made in as many successive years. First the principal shoot at *a* was cut, and before the young shoot below it had acquired sufficient size to tempt an attack, the second cut *b* was made; then *c* probably followed, and a downward shoot was the result; and this being cut, *e* and *f* may have followed. As the decaying portion which is not eaten by the larva is apt from its tender attachment and the rapidity of

decay to drop off, truncated branches like *c, d*, are frequently to be met with.

This insect is more than half an inch long, and of a brown color, spotted with yellowish, and variegated with ashy, a band of the latter crossing the middle of the elytra, the base and end of which are reddish brown.

Guilding figures *ONCIDERES AMPUTATOR* in the Linnean Transactions, vol. 13, pl. 30, in the act of girdling a branch, but he did not discover the object of the proceeding. His figure is copied in *Insect Architecture*, page 240.

Corn Planting.

[The following remarks were prepared as an appendix to Judge Hayes' article on page 6 of the last number, but omitted by the printer.]

In soaking seed grain, care should be taken not to steep it too long, as it will be likely to rot in the ground, if there happens to be a spell of wet weather. Judge Buel soaked his seed corn from twelve to twenty hours in hot water, with a few ounces of salt-petre dissolved in it; and to eight quarts of seed he afterwards added half pint of tar diluted in a quart of warm water. After being stirred in the tar mixture, the corn was taken out and mixed with as much plaster as would stick to it. This preserved the seed from birds &c., and caused it to germinate readily.—The Genesee Farmer recommends a coating of soft soap and plaster.

Quack Medicines.

We were annoyed at finding an advertisement of a "cherry pectoral" on the cover of the first number, which was inserted whilst the publisher was at Harrisburg. The means to which the maker of this nostrum resorts, may be judged from the following caution from the cover of the American Journal of Science, the editor of which is represented with all his titles of Professor, M. D., LL. D., &c., as the author of one of the recommendations given.

As Professor Silliman is a doctor of Medicine, and as some physicians occupy the very questionable position of druggists, we are bound to state that it is *unprofessional* to vend or advertise a nostrum the maker of which uses the name of a member of the profession to deceive the public.

TO THE PUBLIC.

The recommendation of the *Cherry Pectoral* (so called) signed by my name is a *forgery*.

B. SILLIMAN, Senior.

New Haven, January 1, 1851.

Horticultural Society's Medal.

The new medal of the Pennsylvania Horticultural Society is a beautiful specimen of art, which must be highly valued by those to whom it is awarded as a prize. It is two inches in diameter and contains a seated figure of Pomona, her left hand resting upon the shield of the arms of Pennsylvania, and her right holding a pruning knife. In front a boy presents

her with a basket of fruits, and the earth is represented covered with flowers. The reverse is encircled by a wreath of fruits, flowers and foliage, with a central blank space for the inscription, which must of course vary according to the occasion, and the person to whom it is awarded.

Encouragement.

Almost every mail brings us encouraging communications from friends throughout the State; an extract from one of which we give below. With such friends to sustain us we go on trustingly; feeling confident that the effort we are making to build up a journal worthy the support of the farmers of Pennsylvania, will certainly prove successful:

GREENSBURG, April 17, 1851.

SIR:—I am greatly gratified by the appearance and contents of the first number of the "Farm Journal," and sincerely hope that, with such excellent inducement, the farmers of Pennsylvania may at length prove that they are sensible of the advantages of having a periodical of their own. I have had painful and costly experience of the fact that many of the suggestions of Agricultural papers published elsewhere are so unsuited to our soil and climate that they are injurious rather than advantageous. This is of itself, to say nothing of what of a decent self respect seems to demand, a sufficient reason for giving your journal that liberal support which is necessary to make it worthy of the cause which it advocates and the State in which it is published.

Feeling a deep interest in the success of your periodical as connected with the agriculture of our State, it will give me pleasure to contribute, by any means within my power, to aid in securing that success.

Incorporation of the Pennsylvania State Agricultural Society.

As the provisions of the act incorporating this Society do not appear to be generally understood, we herewith present those most important to be known. The following is the principal section:

"Resolved, That the sum of two thousand dollars is hereby appropriated to said Society, and annually thereafter a sum equal in amount to that paid by the members thereof into its treasury; an affidavit of which fact, and the amount so raised by the Treasurer of the Society being first filed with the State Treasurer: *Provided* that such sum shall not exceed two thousand dollars in any one year."

It will be seen, that after the first year the amount of the appropriation is made to depend upon the amount paid into the Treasury by the members.—This fact should arouse the friends of the Society, and induce them to spare no efforts to secure additional names.

The same provision is made to apply to County Agricultural and Horticultural Societies, except that the appropriation is to be paid from the County Treasuries, and is limited to one hundred dollars per annum. Where two Societies are formed in the same county, but one is entitled to receive such appropriation in any one year under this act.

These appropriations though small, will nevertheless have the effect of stimulating the efforts of those who pioneered the way to the formation and incorporation of the present Society. Perseverance and energy will do the rest.

Communications.

Accurate Experiments.

The utility of accurate experiments, and the advantages of an early harvest of the wheat crop shown.

MR. EDITOR:

In the practice of Agriculture with a view to its improvement, there is no matter of greater moment, than the right method of conducting experiments.—Without entire accuracy and the utmost care in such proceedings, there can neither be satisfaction in the conclusion which one would attain, nor any certainty in the evidence he would desire to afford of the results of his operations. In order that an experiment may constitute a basis for safe practice or correct reasoning, every circumstance and condition of time, locality, space, quantity, quality, climate, and temperature, should be duly observed and considered; nothing that can be weighed or measured should be guessed at; and all the processes, as well as the result, should be faithfully recorded. Unless this be done, it is impossible that the experimenter himself, much less others, should be able to repeat the experiment, so as to determine whether the result be true or not. But the result is the essential fruit, and an experiment is barren, when it cannot be verified by repetition. It is obvious, therefore, that its chief value, must depend upon the minute accuracy of its details and the clearness and veracity of the report. The reflection is often, indeed, forced upon us, that much of the influence of useful knowledge is lost by vague and imperfect description; which, obscuring the truth, fails to excite attention or inspire confidence. Hence important discoveries are allowed to sleep for years; and many improvements, after being laid aside, are in a subsequent age, brought again, as if by accident, into use, and regarded as inestimable. Hence inventions employed and prized in one country, are often either unknown or without just appreciation in a neighboring State.

In this connection may be mentioned the want of suitable means and appliances among our farmers to pursue their inquiries or record, their experience with due correctness. There is not one farm in a hundred, whose fields have been surveyed, so as to define their precise arable contents. How few farmers keep a set of weights and measures, and the proper instruments for making accurate investigations relative to their farms or their produce! Still fewer use such means as they have, and write down their observations for the benefit of others. The difficulty may have occurred to many, as it has to myself, of obtaining a satisfactory statement of the greatest quantity of wheat grown, per acre, on any farm or field in any one year. You may not, indeed, fail to receive prompt answers giving specific quantities; but upon a close examination, you find the quantities depend upon conjectural estimates;—either the number of acres was not ascertained,—the whole product was not mea-

sured,—or the amount was derived from the sales, with an estimated addition for what was used in the family and retained for seed.

On recurring to the discussions of many subjects, (that of lime among the number,) which are spread over the pages of our agricultural journals, we see how contradictory, rambling, unsatisfactory, and inconclusive they are, chiefly for want of correct processes of investigation, proper experiments, and diligent investigation.

As a model of accuracy, and at the same time as furnishing important information on a point of great practical utility, the experiments of Mr. Hannam, of Yorkshire, England, made in 1840, to ascertain the best time for cutting wheat, are worthy of the careful attention and study of all farmers. I am persuaded that the commencement of our wheat harvest is generally too late, and that there would be an improvement in the quality as well as a prevention of waste, by beginning a week earlier than usual to reap or cradle our wheat. The superior brightness and strength of our summer sun, ripen the grain more rapidly than it is matured under the cooler and more cloudy sky of England, and proportionally diminish the intervals noticed in Mr. Hannam's experiments. Mr. James Porter, who was an excellent farmer of Lancaster County, mentioned an instance in his own experience, which fortifies the opinion just advanced, in favor of an early harvest. He was induced in order to accommodate a purchaser, who wanted the immediate use of the field, to cut his wheat whilst it still was apparently so green, that he had much misgiving as to the result, and his neighbors freely expressed their belief that he would lose the crop.—Not only, however, was the yield good, but the quality of the flour manufactured out of this wheat, was unsurpassed by any that he had ever produced.—Other instances of the same sort are doubtless within the recollection of many;—and in relation to the waste, every one must remember occasionally to have observed, immediately after harvest, enough of the grain shelled out and lying among the stubble, to furnish seed for another crop:—but, to the experiments.

Mr. Hannam selected for them a field of *red wheat*; and on the 4th of August, 1840, he cut a sheaf. “At this time it was quite green, i. e. both straw and ears were in full vigor and full of sap. Though the grain appeared perfectly formed the chaff still adhered so firmly to it, that it was scarcely possible to separate them by friction in the hands. When separated it was large and plump, but so full of milk that the slightest pressure reduced the whole of it to a juicy consistency or pulp.”

This sheaf stood in the field for a fortnight, when it was housed. On the same day, the eighteenth of August, he cut another. The wheat was yet green, being what farmers in England commonly term *raw*; “that is, the straw, though appearing at a distance

green, when examined closely, was of a hue fast approximating to yellow; while for about a foot upwards from the ground, it was quite yellow. The ears too were more open, the chaff tinged with various shades of yellow and green, the grain itself when separated, soft and pulpy, but not near so full of fluid as before." At the end of another fortnight (September 1,) he housed the sheaf cut August 18, which had remained exposed to the weather in the interval. This was ripe—not meaning thereby, says Mr. Hannam, "that degree of ripeness when the straw breaks, the ear curls, and the grain shakes out, but the condition in which it is customary to commence reaping it—when the straw from the roots to the ear, is uniformly yellow and has lost all symptoms of vivid health."

On the 14th of September, the third sheaf was taken from the field and carefully preserved along with the other two till the first of November, when out of each he selected 100 ears or heads, and put each parcel into a separate bag. The straw from each of these parcels was carefully preserved.

The ears in bag No. 1, (or that cut very green) were now threshed, the chaff carefully separated, and the gross weight of the wheat yielded, ascertained by an extremely accurate balance. The weights of a fixed measure, of a certain number of grains were next found. To avoid error, *this was repeated several times.*

No. 2, (cut raw) and No. 3, (ripe) underwent the same process; and the results are exhibited in the following table:—

Time of reaping & condition.	Gr. produce.	Eq'l measure.	Equal number of grains
No. 1. Aug. 4, v. green,	576	568	19½
No. 2. Aug. 18, raw,	736	580	23½
No. 3. Sept. 1, ripe,	650	570	22½

As this table is merely comparative, (Mr. Hannam remarks,) the weights used being in parts and decimal parts of the same, for the convenience of minute experiments, he furnishes another table of the absolute weight of each sample, in ounces, drachms, scruples, and grains, Troy, as follows:

1 Gross produce.	1 Equal measures.	1 Gross no. of grains.
oz. dr. sc. gr.	oz. dr. sc. gr.	oz. dr. sc. gr.
No. 1. 4 " 0 " 0 " 0 3 " 7 " 1 " 13 0 " 1 " 0 " 5 3		
No. 2. 5 " 0 " 2 " 13 4 " 0 " 0 " 13 0 " 1 " 0 " 17 2		
No. 3. 4 " 4 " 0 " 6 3 " 7 " 2 " 0 0 " 1 " 0 " 15 4		

Comparative weight of 100 straws of an equal length, belonging to the samples, Nos. 1, 2, 3.

No. 1. (green) = 550

No. 2. (raw) = 475

No. 3. (ripe) = 450

He next proceeded to ascertain the comparative worth of each description, consulting an extensive grain grower as to the values of the respective samples according to the prices of the day, and an extensive grain factor and miller as to his opinion of their

value, and what he would give for the same. Taking the mean of their estimates, he found that No. 1 was worth 61s. per quarter, or 7s. 7½d. per bu. No. 2 " " 63s 6d. " " " 7s. 11½d. " " No. 3 " " 61s 6d. " " " 7s. 8½d. " "

He deduced from these tables the conclusion, that the wheat reaped a fortnight before it was ripe had the advantage of the ripe in every point:

1. In weight of gross produce 13½ per cent.
2. In weight of equal measures ½ per cent. nearly.
3. In weight of equal number of grains 2½ per cent. nearly.
4. In quality and value above 3½ per cent.
5. In weight of straw above 5 per cent.

The sample No. 3, (ripe) he observes was very bold but rather coarse, feeling rough in the hand; while No. 2, (raw) was quite as bold but *very fine and thin in the skin.* No. 3, (green) was also a good and clear sample, *but much smaller than either of the others.*

He next supposes three acres of wheat of uniform quality, one of which reaped when ripe, yields thirty bushels of grain and one ton of straw—the value of this produce he fixes as follows, viz:

	£ d. s.
30 bushels of wheat at 61s 6d per quarter,	11 10 7½
1 ton of straw, - - - - -	1 6 8
	12 17 3½

And according to the data furnished by the foregoing experiments, he finds the produce of the other two acres—and its value as follows: the acre reaped a month before ripe, yields

	£ s. d.
26-1356 bushels at 61s. per quarter,	9 19 3½
195,5-9 stones of straw, - - - - -	1 12 7
	11 11 10½

And the acre reaped a fortnight before the ripe, yields 30.1307 bus. at 63s. 6d. per quarter, 11 19 1½ 168 stones of straw, - - - - - 1 8 1½ 13 7 3½

Showing a loss of about 10 per cent. by cutting very green, and a gain of ten shillings per acre, or nearly 4 per cent. by reaping in a raw state, or a fortnight before it was ripe. He concludes that it is the farmer's interest, *to cut his wheat before it becomes thoroughly ripe;* and though others should distrust his deductions on account of their importance and the limited character of the experiments, yet having retraced step by step his investigations without any variation, he could no longer refuse to believe it true. There are some other advantages which he points out, independently of the 4 per cent. gain, by reaping wheat a fortnight before it is ripe: 1st. Straw of a better quality; 2d. A better chance of securing the crop; and 3d. A saving in securing it.

In a communication to the *Quarterly Journal of Agriculture*, March, 1842, Mr. Hannam remarks in relation to these experiments, "At the time I wrote you last, I stated that the bulk of the wheat reaped by me during the present harvest was unthreshed.—

I could, therefore, only give you an idea of the raw and the ripe, by opinion, from a sample sheaf. Since then the various cuttings (for I made several) have been threshed and ground: the result of which was, 3½ bushels of the ripe gave 10 stone 11lb of good flour, 1 st. 9lb of seconds, (technically termed "sharps") and 2 st. 5lb of bran; 3½ bushels of raw, gave 12 st. 6lb of flour, 12lb of sharps, and 2 st. 1lb of bran.—From which it appears, that the *raw cut* wheat gave six and four-seventh pounds of flour to the bushel, more than the ripe gave, while the latter gave three and one-seventh pounds more sharps and one and one-eighth pounds more bran, than the former, per bushel."

The editor of the *Cultivator* (of Albany,) noticing the above facts, adds—"A farmer friend of ours, found last season that one of his fields of wheat, then in a very raw state, was badly struck with rust. He determined to cut it at once and did so, amid the laugh and pity of his neighbors, who thought him little better than crazy. The adjoining fields suffered little from rust, and stood till fully ripe; yet at threshing, the wheat first cut, gave the finest flour and the best yield."

A. L. HAYES.

Lancaster, April 8, 1851.

Agricultural Schools, No. 2.

In your last paper I gave a short account of the number of Agricultural Schools in Europe—of the extreme interest that those governments show, in spreading a knowledge of Agriculture, among their people, which we supposed to be mere crushing despotisms, and without the slightest sympathy, with the great mass over whom they rule. I also ventured an opinion, of the truth of which I have been for some years convinced, that this country, sooner or later, must feel itself compelled to adopt some system—some general and popular plan, by which that large body of yeomen, who cultivate their own farms, and who form the great moral and political centre of our institutions, shall be able to receive instructions in the art, by which they are to live. As yet, nothing has been done, except by a few individuals, whose success, though perhaps but moderate, has shown the mere possibility of mere extended usefulness, and a wider influence, if patronage and support were generally given to them. But the exertions of individuals, however energetic, cannot do all that is necessary for the instruction of the immense body of our farming population. There must be a system, established throughout the whole State, by which every farmer's son can be taught the principles of agriculture, its theory and its practice, and the elementary parts of all those sciences, which form the basis of the art. There are persons, who belong to the stagnant school of indifference, who will say that Pennsylvania is not prepared for such a plan—that her legislature is not wise enough to frame or support one, and that her people are not yet suf-

ficiently advanced to receive the idea or to act upon it. Although this is a very common remark, we believe that it wrongs, and does injustice to the people of the State. The fault, or deficiency, if there be any, is not with the people, but with these who lead the people. Let these men, turn from being politicians, to the being patriots, give up the slang and cant of party, devote their minds to higher purposes, and more generous duties, endeavor to distribute useful knowledge with as much zeal, as they now take to advance themselves; open wide the portals of science, take the people by the hand, and lead them towards them, and we have no doubt whatever, they will find an intelligent, a willing, and a numerous audience. Over the whole of this broad Commonwealth, in every county and in every school in every county, where the elements of each science allied to agriculture, which form, indeed its essential parts, should be taught.

These are not mysteries, to be acquired only by the few—Chemistry and Botany, are not more more difficult than Mathematics. Carbonates, Acetates, and Sulphates, that now seem to alarm, as if they were sheeted ghosts, are not less readily understood, than Triangles, Parallelograms, or than even the simple rules of arithmetic. All that is necessary for a lad to know of those two sciences, should be taught, as an amusement, and not as an intellectual exercise or task. A very short instruction would give an intelligent boy enough, to make him master of many of those things that now seem to him, deep, inscrutable and inaccessible mysteries. Why, then, is it not possible, to attach to every school, a small Laboratory, a small cabinet of minerals, illustrations of the geological character of the neighborhood, and the State; models of agricultural implements, with a collection of books on agriculture, mechanics, &c.—The expense would be very little, the utility infinite, for, of all the objects that one who has at heart the interests of the great body of farmers should work hard to secure, there is not one of more importance than that of making them students of their art, and with it, students of nature. Now, the larger part of a farmer's life is passed in dull and unintelligent drudgery: his toil, severe as it is, is not enlightened toil, it has no pleasures, unless in the hope of gain, neither his heart nor his brain are interested; his daily round of occupations, is regarded as a matter of mere duty, or of necessity, while God's works about him bring neither admiration or enjoyment. All this would be changed, by enlarging his knowledge of his art, by his understanding the phenomena that are ever passing before him, by his being able to think and reason intelligently upon all those splendid exhibitions of power which it is his particular privilege to see daily and be ever among. The plan laid before the people of the State by the Secretary of the Commonwealth, able and excellent as it was, is, we fear, too much above the general tone of thought of the mass of our citi-

zens. It would be an Agricultural University, and not a primary school, and the expense of its education would make it impossible for much the larger portion of our farmers to use the advantages that it would offer. Such an institution would unquestionably place Pennsylvania in advance of her sister States, and give her a lofty position. It would, indeed, place her beyond all other countries, as not one has sketched or adopted a plan so comprehensive.

But the elementary kind of education to which we have alluded in these remarks, might be carried out by the State, at a very small expense. The chief obstacle, and it is one that will not be easily overcome for some time yet, is, the difficulty of finding competent instructors. Young men in this country, of good education and respectable talents, would not accept the office and undertake the arduous duties of a teacher, upon a salary very little more than is demanded and paid to a day laborer. Our people do not yet seem aware that the brain is a very different machine from the body—that mental toil is ten-fold more exhausting than physical—that teaching is one of the most anxious, laborious, life-wearing occupations, in which men can engage, and that, if they wish to secure the services of well instructed men, and induce such persons, to enter upon and continue the career of teacher, they must tempt by sufficient compensation. To do away, as far as is possible with this difficulty, which is certainly one of no small magnitude, the County Agricultural Societies might employ lecturers, and make the collection of a library, a cabinet of minerals, of implements, &c., a part of the special object of their foundation.

The State Agricultural Society has the education of farmers, as a portion of its constitution. If this association succeeds in all its designs, and is well supported by the people of the State, there is very little doubt that in five years from this time, every farmer in the Commonwealth will be fully alive to the importance of instruction, in his art, scientific as well as practical, will also duly appreciate his own position, and then go forward in a body, and demand that all those aids shall be placed within his reach, by which he proposes to elevate himself and his occupation to a real and not nominal dignity and distinction. Thoroughly to effect this, liberal minded men must devote themselves laboriously to the interests of their fellow-citizens, make, if necessary, even severe sacrifices, of time and toil and labor too, without reward or the hope of it. Their enthusiasm must be fed from their own hearts, they must feel the impulse of a high purpose—find their support in a generous love of their country, and, never for a moment, be checked or disengaged, by doubt or indifference, both of which will clog their path, and impede every movement.

A. L. ELWYN.

 The turnip is, by scientific farmers, denominated a cruciferous plant; belonging to the same genus with cabbage.

Lime.

The use of lime as a fertilizing substance for land, has long been known, and in many parts of the country has been brought to great perfection. There is, however, great difficulty in the practical use of this valuable manure, as no universal rule can be adopted for its application. For instance, the quantity must be graduated, according to the character of the soil, and the neglect of this fact alone has produced the great difficulty. Deep soil, filled with vegetable matter, will take three times more lime, than should be applied to thin soil, containing a much more limited quantity. Then again, wet land will bear a much larger proportion than dry. The only safe rule to adopt is, for every man to experiment for himself, and after understanding fully the nature of lime and the character of his soil, he cannot go astray. It is very common to hear farmers, who have been induced to use lime, say that their land has received no benefit from it. The problem is easily solved—they did not know how to use it.

I have tried upon my land, for several years, various experiments, and have constantly become wiser in the mode of using it. I have never failed to find that my land was most materially benefitted by it, and I feel great confidence in recommending it to others. I shall proceed, very briefly, to give my views of the character and efficacy of lime, as a manure. I will state in the first place, that the use of this manure is so imperfectly understood, as well as the office which it performs, that, it is proper to place it, in a practical form.

Lime forms a constituent part of some grains such as wheat and rye, as is ascertained by chemical analysis; and where no lime exists in the soil, the crop becomes sickly and imperfect. But in most vegetables it is a mere *decomposer* of the vegetable matter in the soil, furnishing by this means a constant nutriment to the plant. This at once explains the reason, why light soil, containing but little vegetable matter requires less lime, than that which is more strongly impregnated. I have tested this in various ways, and on a variety of soils, and every experiment confirms its truth. If I were to put one hundred bushels of lime upon an acre of poor soil, I am certain I should raise no crop for two or three years, for the simple reason that there would not be sufficient vegetable matter for the lime to act upon, and to use a common expression it would *burn* the land. Before it could be available, it would be necessary for the lime to become neutralized in the soil, and the additional aid of successive vegetation, such as might grow, to remedy the difficulty. After this process shall have taken place, it will produce in abundance. Twenty or thirty bushels to the acre, for the first dressing, is sufficient. It plainly follows from what has been said, that a different soil, deeply impregnated with vegetable mould, will bear a much larger quantity of lime. For such land, one hundred

bushels to the acre is not a large quantity. I would not exceed that quantity upon any land, but for the first dressing would graduate it from twenty to one hundred, according to the nature of the soil.

Now as to the mode of its application. Generally, it is put upon a ploughed field in heaps, and spread, and afterwards ploughed under. I regard this as a most pernicious mode of liming. In the first place, the spots where the heaps are, receive too large a quantity, and in the next place by ploughing it under, the lime gets too deep to act successfully upon the vegetable matter in the soil—consequently its beneficial effect is lost. Lime is heavy, and its tendency is to sink. The great object is to keep it as near the surface as possible. For several years I have adopted the method of spreading it upon the sod, and this furnishes the most successful mode of renovating an old meadow. It is spread from the wagon, and it requires but little experience to graduate the quantity according to your wish. In a short time the lime sinks into the spungy sod, and decomposes all dead vegetable matters, which at the same time nourishes the roots of the grass and causes the blades to spring up with extraordinary vigor. I have had old meadows double their usual quantity of hay the first year after this process.

Then again, when you desire to plough the same meadow, the lime having sunk into the sod is still upon the surface, and ready to act as a *decomposer* of the sod, and manure in case the land should require it. If the ground should be left in meadow, it will be found that successive crops of grass will be greatly increased.

I might extend this communication to a much greater length, but as you will often hear from me, I am desirous of consulting brevity.

LUTHER KIDDER.

Wilkesbarre, April 19, 1851.

Rural Taste.

MR. EDITOR: I have just received and read with great satisfaction, the first number of the Pennsylvania Farm Journal.

Pennsylvania Farmers are wisely careful in venturing the support of new enterprises; but no one acquainted with the qualifications of Professor Halde- man, or with the character of his accomplished correspondents, can ask a more reliable guarantee for the character and worth of the paper, or hesitate for a moment to give himself the benefit of its *society*, whatever personal preferences he may entertain for other papers or editors.

The most intelligent agriculturist can never say "I have learned all." Old farmers know this; only the merest beginners, or those who, like the poet's ploughman, "go whistling along for want of thought," suppose that they know everything. One must learn much before learning what is to be learned.

As to the farmer, no occupation or profession what-

ever, embraces so wide and deep a range of knowledge as his. Indeed it seems impossible for any one man ever to become accomplished in the whole range of agricultural subjects; for men who have given undivided attention to a single branch—as, for example, the rearing of cattle, the arrangement of crops, the art of improving lands, whose heads are grey and some skill eminent, all freely own that they find theirthing to learn continually.

But as the farmer must know something of every branch of his business, his knowledge of each is necessarily superficial, and as he cannot see or consult with Doctors of agriculture face to face, how can he do better than to communicate with them through the medium of a paper, which is the common channel of the whole agricultural intelligence of the community, and which, if it contains some that may not be applicable to his peculiar situation, yet affords seasonable hints, and timely lessons of instruction.

It was a fine saying that "God made the country, and man made the town." But in making the country the Almighty has left it to the exercise of man's ingenuity to use the exuberance of materials everywhere ready to his hand. Man must clothe and shelter himself, and he can do this either neatly and comfortably, or wretchedly and as a sloven.

In nothing are country dwellings more generally deficient than in the arrangement of the gardens and fruit yards immediately around them. In a new country, a whole generation is fully engaged in clearing the wilds, and growing bread; and the art of producing a supply of various and delicious fruits, and of making home to smile in Nature's best adornments, becomes almost lost and forgotten. But a taste for such serene enjoyments is natural to every descendant of gardner Adam, and no information that your columns can render, I venture to say, will be more gladly received through the villages and country homes of Pennsylvania than some first lessons in Horticulture.

The magnificent barns of the Pennsylvania farmers are objects of general admiration, and it is by no means for want of *will* that the owners of these structures do not render their own dwellings as cosy and as snugly sheltered as comfort and full enjoyment seem to require. We see, quite too often, the rickety skeletons of dead shrubbery and shade trees, (and very often, too, the *living skeletons*) to procure and plant which a sufficient amount of trouble was incurred, all resulting in dead and discouraging failure through want of a little knowledge of the art (simple when understood) of selecting, planting, training, and arranging the leafy decorations of the earth.

A general diffusion of *correct information* on this subject of screening, shading, carpeting, and garlanding the farmers fruitful and happy home, would I doubt not, enliven thousands of our rural homesteads; and add immensely to the enjoyment of their occupants.

W. G. WARING.

Boalsburg, Pa., April 24, 1851.

Experimental Farming.

MR. EDITOR.—In forwarding you my name as a subscriber to your valuable journal, I have thought it might not be uninteresting to offer a few remarks in reference to some experiments which I have made in farming. I profess to be but a plain farmer, and what I communicate will be probably only interest those of the same class, if indeed it should impart interest to any one. More than twenty years of my life have been spent in Philadelphia, and my removal to the country was on account of my health, which had been impaired by close application to business. There is a prejudice too in the country against what are termed "citizen farmers;" though I doubt whether many, who have been reared *practical Agriculturists*, have performed more real hard labor in farming for the last ten years than myself.

I have resided upon my farm eleven years. When I moved on to it, I found it in a very poor state of cultivation, although it had the reputation of being one of the best farms in the country. It had been rented for more than ten years, and of course cultivated, as most rental farms are, to get all that is possible to gain for the *present*, without much being done for *permanent improvement in the future*. The soil is mostly limestone, and the farm at present contains 285 acres, two hundred and forty of which are in grass and under cultivation, and the remainder woodland and lime quarries.

One of the first attempts I made at improvement was to remove the old fencing, and alter the size of nearly all the fields, so as to be able to destroy all the noxious weeds and other trash that had accumulated, and were scattering their seed broadcast over the land. I have brought into profitable cultivation more than twenty acres of valuable meadow land by ditching, that were of very little value before. More than thirty thousand bushels of lime have been spread upon the land in the eleven years it has been under my direction. In addition to this I have expended large sums for manure. But this latter plan of buying manure I have found expensive, and I have been trying for two years past to find a substitute in part for this item. My plan now is, to manure all my corn ground; sow clover in my corn or oats field, and the following year make open fallow of them for wheat. In June, 1849, I ploughed down a light crop of clover in a field of eighteen acres, and then sowed the ground with corn, at the rate of two bushels to the acre. This I left grow until it was from six to ten feet high, when it was all *ploughed under* about ten inches deep with a heavy team. After letting the ground lay until near seeding time, I had it well harrowed, and then drilled in the wheat, one and a half bushels to the acre. I never saw larger wheat grow on any ground, and there were hauled at harvest *seventy-two horse rack-wagon loads of straw and wheat from the field*. The wheat sowed was Mediterranean, excepting six acres, which was white wheat, and

which was injured very much from the attack of an orange colored worm about the size of a grain of Timothy seed.* The season too was rather wet, and the fields did not average quite twenty-five bushels to the acre. Adjoining this, I had a field of twenty-six acres (all Mediterranean) which was oat stubble, thoroughly manured, the yield of which was twenty-six bushels to the acre. The field in which the corn was *ploughed under* had but about six loads of manure on some dry ridges. On the two fields, forty-four acres in all, I sowed Timothy in the fall and clover in the spring following, and now (April 19) the grass in the field where the corn was turned under is decidedly the best.

In order to test again the advantage of *ploughing down green corn*, I pursued the same course last summer with ten acres, in a field of forty-one acres, for wheat. The corn was not sown until about the first of July, and then did not grow well; was only about four feet high and not as thick on the ground as I wished to have it when ploughed under. On this ten acres there was not put a fork-full of manure, and the clover had been pastured down pretty close previously to ploughing for the corn. The remainder of the field was well manured. The ten acres of corn ground were not seeded until a week after the other part of the field, and now (April 19) I would rather take my chance with this part for a crop of wheat than the rest of the field. It is true the part manured is larger in growth, but it was seeded a week earlier and much of it is now too rank.

There was much speculation among farmers about the field of corn ploughed under in 1849, many asserting that the heavy growth of fodder could never be got *under*, others that it would make the ground sour and the whole would prove a failure. But all was neatly accomplished, even beyond my most sanguine expectations. I may here remark too, that a portion of the corn nearest my dwelling (which was the last turned under) was so luxuriant that I gathered more than a dozen ears suitable for boiling.

I fear I have wearied the patience of your readers and I must now close these hasty remarks. I may drop you a line upon the same subject after harvest if life is prolonged.

Respectfully, &c.

WILLIAM STAVELY.

Partridge Hall Farm,

Bucks County, April 19, 1851.

*This must be the *cecidomyia tritici*, (an insect much like the hessian fly) which infests the heads of wheat.—*Ed.*

 Salt your cattle often after turning them to grass. The change from dry feed to green, succulent matter, demands this. Ashes mixed with salt should be given to sheep—charcoal and salt to swine.—*Sussex Home Journal*.

Agricultural Chemist of Maryland and his Report.

MR. EDITOR: There is a slight error in your first number, wherein you say, that the State of Virginia has recently taken a step far in advance of her neighbors, by providing for an Agricultural Chemist.* Maryland, by an Act of her General Assembly at the Session of 1847, '48, created the office of Agricultural Chemist, with a salary of \$1500 per annum, and an allowance of \$200 for the first year, and not exceeding \$50 for each succeeding one, for the purchase of chemical instruments and materials. "Honor to whom honor is due." Virginia deserves commendation for her liberal and wise policy in this respect; but our noble sister, still nearer to us, has taken the lead. Under the Act above mentioned, Dr. James Higgins, was appointed Agricultural Chemist for Maryland, and as soon as he could procure the necessary apparatus, tests, and re-agents, entered upon his duties. He was required to make an annual report to the House of Delegates, of his proceedings; and he accordingly at the ensuing Session, submitted his first report, 10,000, copies of which have been printed by order of the General Assembly. It occupies 92 pages octavo, and is replete with the most valuable and interesting matter.

The State of Maryland, is divided into three "Gubernatorial Districts;" and the State Chemist is required to spend one year in each of these, analyzing the soils, marls, and other vegetable and mineral deposits, and delivering public lectures in the several counties. His report is chiefly devoted to the first of those duties, and details the results of his numerous examinations of the soils of a portion of the Eastern Shore of Maryland—the part of the State which lies East of the Chesapeake Bay, and of the remarkable deposits which are diffused through that district, and destined to renovate and enrich it beyond calculation.

As practical utility was the prescribed aim of his instructions, it is interesting to observe the manner in which he viewed this business of Analysis, and what he deemed to be its appropriate objects and uses. He considers his duty to be, to analyze the varieties of soil in order to determine the presence or absence of the necessary constituents of crops—whether these existed in sufficient quantities—and what particular substances would most economically supply deficiencies, so as to render barren soils fertile, and retain the fertility of those which are already productive. The necessary constituents of crops are

the substances, which are always present in plants, in all climes and under all circumstances, and which those that administer to the sustenance of the human body, must contain, to furnish the proper elements of its nutriment and growth. Having attained a knowledge of what plants require, we thereby arrive at the necessary constituents of soils. For the food of plants, is derived from the soil and the air which surround them. A certain portion of the elements of plants, from their nature, cannot exist in the atmosphere, and, if not present in the soil, vegetation cannot be produced. As it can be perfectly ascertained, what substances are necessary for plants that are used for food, from our knowledge of the matter in the human body, which is supplied with that food, so we can perfectly ascertain what are the necessary constituents of soils from a knowledge of the material which these plants require for their complete development. The best proportions necessary to constitute a fertile soil, can only be determined by chemical analysis of a large number of fertile soils. With each examination, one certain step is gained in the solution of this great question. When examinations become more numerous, the *minimum* quantity that will produce the largest yield, will be discovered; and *then the perfection of Agriculture will be attained*. All necessary substances, to constitute a fertile soil, must be present, for the excess of any one cannot compensate for the absence or deficiency of another. Those substances are lime, humus, magnesia, potash, soda, phosphoric acid, animal and vegetable, or organic matter, chlorine, sulphuric acid, alumina or pure clay, silica or sand, iron, as per-oxide. But soils very productive, particularly for wheat, may contain small proportions of any one of the necessary constituents, the rest being present in proper proportions.

To retain the fertility of a soil already productive, it is necessary to add to it a quantity of fertilizing matter, equal to that which is taken off by the crop, allowance being made for what may be lost by percolation through the soil. By doing this, we can always maintain soils at whatever point of production they may have, and even increase their productivity. A soil which, from its texture, is particularly good for wheat, may thus be kept in a condition to produce a crop every year, *without any rotation*.—The same is true, with regard to corn or any other crop.

The following remarks on the subject of lime, explain its action as a fertilizer. Lime exists in the soil most generally as a silicate, that is, chemically united to silicic acid or sand. In the human body, in union with phosphoric acid, it forms a very large part of the bones. It exists in combination with different acids in the root, stalk, blade and grain of all plants.

"Besides the necessity of its presence to form the structure of plants, it performs many other impor-

* The passage in question should have read, "a step far in advance of *some* of its neighbors."—The State geologist of Alabama includes agricultural chemistry in his course of instruction at the university. The importance of the subject was insisted upon at the organization of our own geological survey, to which a chemist was attached; and when connected with the survey we collected specimens of soils for analysis.—*Ed.*

tant functions in a soil. It promotes the decomposition of vegetable matter, and thus causes it to yield the different mineral substances which it contains, as means for the production of another growth. It improves the mechanical texture of land; this is but one of its smallest uses. It powerfully aids the disintegration of the minerals (grains of sand) in a soil, which contains many of the necessary elements of plants, and which without the fluxing or fusing power of lime, would still retain them. This is one of its greatest and most important uses; and we cannot yet say, whether or not lime, when applied to a soil, does not act more beneficially in this way than in any other. More investigations by chemical analysis, assisted by practical experiments, must be made than have yet been, to settle this question, and to determine in what manner, under what circumstances, and in what quantities, lime acts best. In none of the soils which I have examined, has it been found in sufficient quantities, except where at some time or other, it has been applied artificially."

The particular combination or proportion of each of the necessary constituents of soils, that will give the greatest yield, has not yet been determined. It can only be ascertained by many careful analyses of fertile soils, in order to see what quantities are present in them; and, by the analyses of soils which are unproductive; then, to find by the application of the necessary manure, the smallest quantity that will produce the greatest benefit. "The experiments hitherto made determine nothing but the mere fact, that some particular manure has acted well on some particular soil. As long as we remain in ignorance of the composition of the soil, so long we can learn almost nothing." To obtain a knowledge of the best manure by its mere application to a soil, without reference to the compositions of the soil itself, he pronounces empirical. The science of Agriculture, like all others, has fixed laws, and must be studied in a rational manner. Each known fact in Agriculture, to be useful, must be developed with *all of the causes* which led to it. A successful or unsuccessful application of manure, is a fact of little value, unless the composition of the soil upon which it was used be determined. "Then *all* the causes influencing its action will be manifest, and each experiment made, will lead us onward to a perfect system; every trial of a manure will teach us how it should be used, and when rejected."

A. L. II.

Lancaster, April 11, 1851.

CORN SOWED FOR FODDER.—Who has tried *sweet corn* for this purpose? Our own experiments have been limited; but for milch cows we believe it is preferable to other kinds of fodder, as it may be sown thickly by using a full dose of special manure, and as too thickly sown to form ears, the stalks will contain a large quantity of saccharine matter, and may be sown frequently so as to keep a continuous supply during the whole summer and fall months.—*Prof. Mapes.*

Agricultural Education.

MR. EDITOR: In a previous communication, I attempted to show the importance of an agricultural Journal to the practical farmer, and in a spirit of unaffected earnestness, urged upon the friends of agriculture the expediency of giving their countenance and support to your undertaking. It appeared to me that a State so essentially agricultural as ours is, should at least be able to sustain one periodical exclusively devoted to the interests of farming. If every working farmer or his son, and every amateur farmer, with every Storekeeper and Miller, would subscribe to the "Farm Journal," it would do away at once with the reproach that Pennsylvania with her broad acres of tillable land, cannot afford sufficient encouragement to a paper, published with the view of benefitting those who live by the soil.

It should not surprise that storekeepers and millers are included in the category of patrons to such a publication. Who will deny the relevancy in this connection. Where is the storekeeper who is not deeply interested in the success of farming? Not one. They all must admit, that when harvests are most abundant, their sales are proportionably large and profitable. A dollar in the year is but a trifle to every inland storekeeper in the State, compared to even the nominal benefit received in the general prosperity, independent of the intrinsic value of twelve numbers of a journal, every one of which will prove to the subscriber an interesting monthly visitor, which at the end of the year, when stitched or bound together, will become an engaging family companion.

Then as to the miller, he is emphatically the most interested in the matter. Is sound, heavy flouring grain nothing to him? Do not smut, rust, garlic, cockle and cheat, annoy him whenever they present themselves; and can he hesitate to spend a dollar a year upon a work that will show the grain growers how to get rid of those pests, or at least to avoid them? If he does, no one should sympathise with him if his millstones smell of garlic for a month, or if he should be doomed to grind bad wheat for a whole season as light as fifty pounds to the bushel.

But I must not forget that I set out to say a few words on the subject of agricultural education, the expediency of training our youth intellectually, morally and physically, so that they may be able when men, to acquit themselves well, and cleverly, in every position in which as intelligent citizens they may claim to be placed, either to subserve their own interests or those of the public, while they can boast a proficiency in agricultural and horticultural skill,—a Pennsylvania farmer, possessing largely the essentials of a sound, practical education, a man suited for public, as well as private ends.

Had the endowment of an Agricultural college been asked of any Senate or House of Representatives, in

Assembly met, within our recollection, while thousands upon thousands of dollars were being appropriated to literary institutions and other systems, what kind of reception would such a proposition have had? Why, in all likelihood, the mover of the measure, would have been considered as little less than demented, the motion thrown on or under the table, or, at least, the *want of means* would be sure to have suggested the impossibility of granting the gratuity. This want of means will always, in the very nature of things, be a standing, convenient excuse for refusing to grant whenever it would appear to be popular to withhold, however right and proper the granting might be. So long as the Legislative body is merely a representation of political parties, it will exhibit all the elements that governed in the election of its members, and the Treasury will be made to feel the influences of functions devoted exclusively to party—the functionary looking to no other constituency. The industrial classes have no representation respectively. The farmers being the largest class, suffer most for the want of Representatives intimately acquainted with their wants, and sedulously disposed to their interests. Is it not time we should have less partizanism, and more of farmingism, mechanicism, and the like. Must not every reflecting mind concede, that such a change would prove highly salutary in lessening the waste of public time and money, in abating the bickerings and heart-burnings of partizan strife, and in recalling our erring affections, to be united in a pure and primitive devotion to "Virtue, Liberty and Independence!"

If the feeble light I have attempted to throw upon the condition of the farming community, will afford, to the considerate and well disposed among them, but a glimpse at the circumstances of the case, the cause and effect, they will, I trust, be induced to look farther into the fatuity that dooms so large a portion of farmers to unproductive drudgery and toil, that keeps them insensible to their claims to a better destiny; and if they will rally upon some plan, by which Agriculture, with those engaged in its pursuits, may be made to rise to the dignity that sometimes poetically is claimed for it, they will not only do a service to themselves, but to the State likewise.

It is no easy matter to eradicate a disease that is chronic, nor to subdue habits and prejudices of long standing; therefore, with the old and confirmed in apathy, little or nothing can be done in the way of improvement or change; but there are those with whom, and for whom, much can and should be done. I allude to the rising generation. Here is ground suited to seeding, this is the field for operation, to which I invite every friend of Agriculture to labor with a zeal commensurate with the great objects and interests to be achieved. Let no farmer who respects his calling, or loves Pennsylvania, be backward to

enter this field, and having entered, let him never think of quitting it till the work is finished, till the goal is reached, and the prize awarded—the prize, AN AGRICULTURAL COLLEGE or COLLEGES, instituted by the State, wherein every farmer's son may receive a literary and professional education compatible with the dignity of Agriculture, and the pre-eminence which Pennsylvania, in wise and liberal institutions, should assume.

To Mr. Russell, the present Superintendent of the Common Schools, are we indebted for the first effort, I believe in this behalf, by any public functionary of Pennsylvania,—an effort, under the circumstances, as bold, and manly, as its motives, no doubt, were pure and patriotic, and which should be held in grateful remembrance, by every liberal minded farmer throughout the land. Did he but know, or could I express the sense of obligation I felt to him, on reading the project of an Agricultural College in his late official report, it would in some measure compensate for the disinterested service he has rendered to the cause, should there not be found another individual so inclined, but there is no danger that I shall be alone in the expression of thanks, so justly his due.

The Report referred to, suggests one college for the instruction of five hundred pupils and a farm of not less than one thousand acres. With all due deference it strikes me, that the size of the farm and the number of pupils under instruction, in one institution at a time, are on a scale too large for profit and efficiency. The same outlay contemplated for one college, if apportioned to four colleges, having two hundred and fifty acres each, at appropriate localities, with buildings for the accommodation of not more than one, to one hundred and fifty pupils, would prove more beneficial.

The expediency of an Agricultural College is not a new idea with me, but one upon which I have long meditated, as is well known to most of the intelligent agriculturists throughout the whole country. But as this article has already outgrown perhaps the space you can allot to it, and the want of time not permitting to go farther into detail at present, I must reserve further remarks on this interesting subject until another occasion. In the meantime, I submit the few hints already thrown out, to the candid consideration of your readers.

Respectfully yours,
JAMES GOWEN.

Mount Airy, 23d April, 1851.

HOOF-AIL IN CATTLE.—To cure this complaint, wash the hoof *clean* with warm soap suds, very particularly between the claws; then apply linseed oil and sulphur, mixed in about equal parts. The animal should be kept in the stable with a plenty of *dry, clean* litter. By applying the mixture once in two days, (the foot always being well washed previously) the animal will generally be well in one week—and I have known quite bad cases cured within forty-eight hours, with only one application.—*Rural New Yorker.*

Agricultural Societies.

Meeting of Executive Committee.

HARRISBURG, Tuesday, April 29, 1851.

Pursuant to the requirements of the Constitution, the Executive Committee of the State Agricultural Society met at Harrisburg. Present: Hon. Frederick Watts, Dr. A. L. Elwyn, George H. Bucher, Dr. L. Reilly, A. O. Heister, C. B. Trego, James Gowen, David Mumma, Jr. and Isaac G. McKinley.

On motion of Judge Watts, JAMES GOWEN, was called to the chair, and Isaac G. McKinley appointed to act as Secretary, the Recording Secretary not being in attendance.

A. O. Heister, submitted the following resolutions, which were unanimously adopted:

Resolved, That we deem the establishment and success of an Agricultural Journal published in Pennsylvania as essential to the proper exposition of the principles of agriculture as practised in our State.

Resolved, That we approve of the plan of the "Pennsylvania Farm Journal," published at the city of Lancaster, by A. M. Spangler and edited by Prof. S. S. Haldeman: that for the present it be adopted as the organ of the State Society: and that farmers and all others interested in the subject of agriculture be advised to patronise it and contribute information to its columns.

Dr. A. L. Elwyn submitted the following resolution which was unanimously adopted:

Resolved, That the proceedings of the meetings of this Society be published in the "American Farmer," an agricultural journal, published in the German language at Harrisburg, by J. B. Beck, and that this periodical be recommended to the patronage of the German Farmers of Pennsylvania.

The Committee then adjourned until 7½ o'clock this evening.

EVENING SESSION.

The Committee met pursuant to adjournment. Dr. ELWYN submitted the following resolutions which were adopted:

Resolved, That inasmuch as the citizens of the vicinity of Harrisburg have pledged themselves to contribute the sum of fifteen hundred dollars towards defraying the expenses of the first annual exhibition of the State Agricultural Society, it is hereby determined that the same be held near to Harrisburg: provided that grounds sufficient for the exhibition and plowing match be also furnished.

Resolved, That A. O. Heister, Geo. H. Bucher, Dr. L. Reilly, David Mumma and Isaac G. McKinley, be a Committee of arrangement, whose duty it shall be definitely to act upon all subjects pertaining to the first annual exhibition, and that they shall have power to employ such aid and assistance as necessity shall require.

On motion of Mr. Heister it was

Resolved, That Frederick Watts, James Gowen and A. L. Elwyn, be appointed a Committee to select a suitable gentleman to deliver the annual address at the Agricultural Exhibition.

On motion of Mr. Watts it was

Resolved, That the proceedings of this meeting be published in all the papers of Pennsylvania favorable to the cause of Agriculture. Adjourned.

JAMES GOWEN, President.

ISAAC G. MCKINLEY, Secretary, *pro tempore*.

Dauphin County Agricultural Society.

In pursuance of a call for a public meeting in the Court House, in the borough of Harrisburg, on the evening of the 28th ult., the farmers and others interested in promoting the objects of Agriculture, and for the purpose of organizing a County Agricultural Society, met; and on motion of Hon. A. O. Heister, the following officers were appointed:

President—DAVID MUMMA.

Vice Presidents—CHRISTIAN EHRMAN, HENRY HOFFMAN, JOHN WEITZEL, JOHN PAUL, ISAAC ALLEMAN, JOHN GINGERICH, JOSEPH HERSHEY, DANIEL PUFFENBERGER.

Secretaries—E. E. Kinzer, Isaac Hoffer, J. M. Beck.

After the organization of the meeting, the Chairman stated the object of the organization of the County Agricultural Society, in a very plain practical address, and was followed by Hon. A. O. Heister, who illustrated the objects of the call with many useful examples of the result of his experience in raising grain, &c., and then submitted a constitution which was read; whereupon J. H. Berryhill, Esq., being called upon, made a very interesting address and was followed by Mr. Lumberton in a happy speech.

On motion, the constitution was adopted, and H. Gilbert appointed to Treasurer to receive subscriptions to the Society.

Adjourned.

Juniata County Agricultural Society.

The Juniata County Agricultural Society met on the first of March, and after adopting a Constitution, selected the following officers:

President—JOHN BEALE.

Vice Presidents—David Beshoer, John Adams, S. Shanor, W. G. Thompson, William Cox, Jr., William Sterrett, John Brubaker, S. E. Smith, James Lathers, Neal McCoy.

Treasurer and Recording Secretary—Alexander K. McClure.

Corresponding Secretary—E. S. Doty.

Librarian—Lewis Burchfield.

Board of Managers—Gen. William Bell, J. P. Shitz, Hugh Hamilton, John Watson, Edward Jamison, J. Jacobs and Hugh T. McAlister.

REMEDY FOR BURNS.—Dr. Reese, physician of Bellevue Hospital, New York, has been making experiments concerning the best mode of healing burns and scalds and checking acute suffering. He has found that flour, thrown on with a common dredging box, is one of the best and most efficient remedies yet discovered. The external air is one cause of suffering, and the flour thus applied, both heals and closes the wounds to the atmosphere. The edges of the wounds which remained open he dressed with lime and oil, applied by a feather. Dr. Reese says the above application made to wounds by fire, hot water, gunpowder, &c., has been most happy in the practice at the Hospitals.

TO IRON SILK.—Silk cannot be ironed smoothly so as to press out all the creases, without first sprinkling it with water, and rolling it up tightly in a towel—letting it rest for an hour or two. If the iron is the least too hot, it will injure the color, and it should first be tried on an old piece of the same silk. Bright-colored silks or ribbons, such as pink, yellow, green, &c., always change color on the application of an iron. Black, brown, olive, grey, &c., generally look very well after ironing. Silks should always be ironed on the wrong side.

Improved Breed of Cattle.

The Devons.

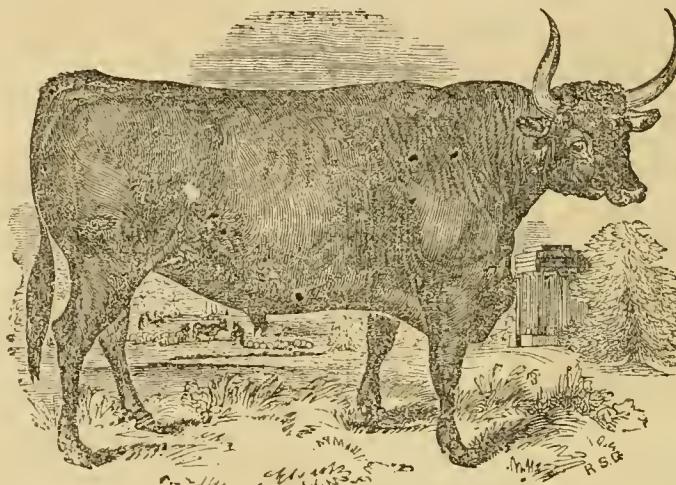
The head of the Devon ox is small, very singularly so, relatively to his bulk; yet it has a striking breadth of forehead. It is clean and free from flesh about the jaws. The eye is very prominent, and the animal has a pleasing vivacity of countenance, distinguishing it from the heavy aspect of many other breeds. Its neck is long and thin, admirably adapting it for the collar, or the more common and ruder yoke.

It is accounted one of the characters of good cattle, that the line of the neck from the horns to the withers should scarcely deviate from that of the back. In the Devon ox, however, there is a peculiar rising of the forehead, reminding us of the blood-horse, and essentially connected with the free and quick action by which this breed has ever been distinguished. It

has little or no dewlap depending from its throat.—The horns are longer than those of the bull, smaller, and fine even to the base, and of a lighter color and tipped with yellow. The animal is light in the withers; the shoulders a little oblique; the breast deep, and the bosom open and wide, particularly as contrasted with the fineness of the withers. The forelegs are wide apart, looking like pillars that have to support a great weight. The point of the shoulder is rarely or never seen. There is no projection of the bone, but there is a kind of level line running on to the neck.

These are characteristic and important points.—Angular bony projections are never found in a beast that carries much flesh and fat. The fineness of the slanting direction of the shoulder, and the broad and open breast, imply strength, speed, and aptitude to fatten. A narrow-chested animal can never be useful either for working or grazing.

With all the lightness of the Devon ox, there is a



THE DEVON OX.

point about him, disliked in the blood or riding-horse, and not approved in the horse of light draught—the legs are far under the chest, or rather the breast projects far and wide before the legs. We see the advantage of this in the beast of slow draught, who rarely breaks into a trot except when he is goaded on in *catching times*, and the division of whose foot secures him from stumbling. The lightness of the other parts of his form, however, counterbalances heaviness here.

The legs are straight, at least in the best herds. If they are in-kneed or crooked in the fore-legs, it argues a deficiency in blood, and comparative incapacity for work; and for grazing, too, for they will be hollow behind the withers, a point for which nothing can compensate, because it takes away so much from the place where good flesh and fat should be thickly laid on, and diminishes the capacity of the chest and the power of creating arterial and nutritious blood.

The fore-arm is particularly large and powerful. It swells out suddenly above the knee, but is soon lost in the substance of the shoulder. Below the knee, the bone is small to a very extraordinary degree, indicating a seeming want of strength; but this impression immediately ceases, for the smallness is only in front—it is only in the bone; the leg is deep, and the sinews are far removed from the bone, promising both strength and speed. It may perhaps

be objected that the leg is a little too long. It would be so in an animal destined only to graze; but this is a working animal, and some length of leg is necessary to get him actively over the ground.

There is a very trifling fall behind the withers, but no *hollowness*, and the line of the back is straight from them to the setting out of the tail. If there is any seeming fault in the beast, it is that the sides are a little too flat. It will appear, however, that this does not interfere with feeding, while a deep, although somewhat flat chest is best adapted for speed.

The two last ribs are particularly bold and prominent, leaving room for the stomachs and other parts concerned in digestion to be fully developed. The hips, or huckles, are high up, and on a level with the back, whether the beast is fat or lean. The hind quarters, or the space from the hip to the point of the rump, are particularly long, and well filled up—a point of importance both for grazing and working.—It leaves room for flesh in the most valuable part, and indicates much power behind, equally connected with strength and speed. This is an improvement quite of modern date. *The fullness here and the swelling out of the thigh below, are of much more consequence than the prominence of fat which is so much admired on the rump of many prize cattle.*

The setting on of the tail is high; on a level with

the back; rarely much elevated or depressed. This is another great point, as connected with the perfection of the hind quarters. The tail itself is long and small, and taper, with a round bunch of hair at the bottom.

The skin of the Devon, with his curly hair, is exceedingly mellow and elastic. *Graziers know that there is not a more important point than this. When the skin can be easily raised from the hips, it shows that there is room to set on fat below.*

The skin is thus rather than thick. Its appearance of thickness arises from the curly hair with which it is covered, and curly in proportion to the condition and health of the animal. These curls run like little ripples on water. Some of these cattle have the hair smooth, but then it should be fine and soft.—Those with curled hair are more hardy, and fatten more kindly. The favorite color is a blood red. This is supposed to indicate purity of breed; but there are many good cattle approaching almost to a bay dark. If the eye is clear and good, and the skin mellow, the paler colors will bear hard work, and fatten as well as others; but a beast with pale hair, and hard under the hand, and the eye dark and dead, will be a sluggish worker, and an unprofitable feeder. Those of a yellow color are said to be subject to diarrhoea, or scouring.

These are the principal points of a good Devon ox; but he used to be, perhaps is yet, a little too flat-sided, and the rump narrowed too rapidly behind the hip bones; there was too much space between the hip bones and the last rib; and he was too light for tenacious and strong soils.

A selection from the most perfect animals of true breed—the bone still small and the neck fine, but the brisket deep and wide, and down to the knees, and not an atom of flatness all over the side—these have improved the strength and bulk of the Devon ox, without impairing, in the slightest degree, his activity, his beauty, or his propensity to fatten.

Varieties of Sheep.

No part of the frame-work of animals, whether races of men or beasts, serves so well as the *head* to indicate the family to which they belong even if it does not show the particular temper and character of the individual.

Thus people accustomed to notice the marks that distinguish from each other the various breeds of horses and cattle at once, on a view of the head alone—the fine muzzle, full eye, thin skin, silken coat, well-defined veins, and hard flinty bone of the high-bred southern courser, will at once distinguish him from the soft-boned, coarse-haired, cold-blooded, flabby and phlegmatic Comestoga; and in like manner, on a view even of a herd of beef cattle, will be prepared with confidence to say, as it passes—This is touched with the blood of the Alderney, or Channel Islands breed, as seen in the ewe neck and deer-like head; that shows the neat head and square frame of the short horn; this again betrays the blood of the Hereford, and that of the Devon, while that beyond sports the long drooping horn of the Bakewell, carrying all his fat veneered on the outside of his frame.

Here we give the *heads* only of two well-known breeds of sheep. The first is that of a Cheviot tup.

The only importation of this race, of which we are aware, was by the Farmer of Marshfield, who probably designed them for his native granite hills of New Hampshire, so well typified by the compact, close-grained, solid nature of his own mind, and mode of reasoning.

The name of this family of the ovine race, implies their origin in the Cheviot Hills of Northumberland.—They occupy, in fact, nearly all the pastoral hills in the south of Scotland, and the best part of the Grampian mountains, and may be regarded as a hardy race, and ought, one would think, to be well suited to the moun-

tainous ranges of our country from Alleghany to Alabama—a high, moist, and verdant, but healthy and delightful region, that needs only classical associations to elevate it in the public regard, even above the far-famed



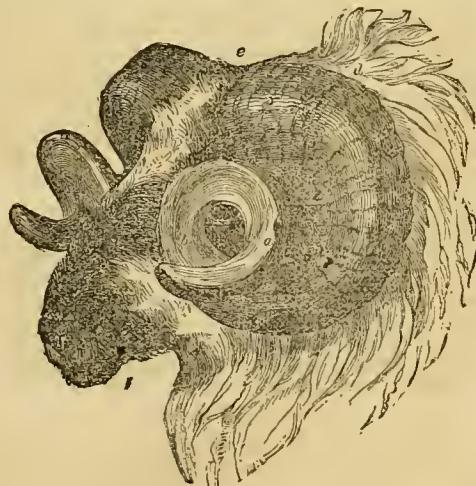
climate of Italy. Yes! there is probably no spot on the globe superior in delightfulness in climate to the mountain lands of Pennsylvania, Maryland, Virginia, the Carolinas, Georgia, and Eastern Kentucky, and Tennessee.

The wool of the Cheviot is short, thick set, and of rather fine quality, fit for the manufacture of inferior broadcloths. In this breed, the fore-quarters are lighter, in proportion to the whole carcass, than in the Bakewell. The flesh is said to be "fine grained, often well intermixed with fat, and is generally esteemed for the table;" but like our frontier settlers, they have rather a disposition to rove and stray off, and do not come to maturity at so early an age as the Dishley or Bakewell, with the blood of which the Cheviot would probably mingle kindly, giving to the former (a more artificial breed) more hardness of constitution.

The portrait which illustrates this sketch represents the head of a Cheviot tup, which gained the first prize of his class at the Highland Agricultural Society's Show at Aberdeen in 1840. It will be observed that its face is longer than that of the Leicester, muzzle not so fine, eye not so full, ears not set so high and handsomely on the top of the head, while it resembles the Leicester in the white face and want of horns.

The next are portraits of quite a different character, being those of a "black-faced" ram and ewe.

The first is that of a ram exhibited at the Highland



Agricultural Society's Show at Berwick-upon-Tweed, in 1841, where he took the first prize of his class.

As indicative of the long time and care with which this breed has been kept distinct and cultivated, notice

the tapering face, small muzzle, and full eye! The arched nose always possessed by the black faced ram, is said to denote boldness and courage. The legs, like the face, are covered with mottled or black hair; the horns are highly picturesque, and will bring to the remembrance of many of his old guests, one that was kept filled with snuff of the most exquisite perfume, always lying on the counter of the bar of the City Hotel, Baltimore, in the life-time of "King David," who boldly led the way in teaching the proper structure and philosophy of hotel keeping.



The wool of the black-faced sheep is long and coarse, which renders it of little value in manufacturing. The carcass, however, is well formed, carrying its depth forward to the brisket, better than the Cheviot; yet the entire body being narrow, owing to the flatness of the ribs, gives too much lightness, or want of what is called *substance*, to the whole carcass.

The flesh is said to be fine-grained, high-flavored, and highly esteemed. This breed too, is very hardy, frequenting the highest parts of the heath-clad mountains of Scotland, and requires little care from the shepherd. We wish we had a pair to send to our esteemed friend and most accomplished "gentleman of the old school," Dr. B—, proprietor of the Warm Springs, Bath County, Virginia.

The reader may observe that in these cases one is called a tup, and the other a ram. These names are synonymous; but there are technical names employed in all English agricultural writings, according to the age and sex of sheep, with which every liberal-minded reader who is not, would like, once for all, to be made acquainted. At some more convenient moment that shall be done. At present we have not an atom of time or space to spare. Yet in all times and circumstances, we have no ambition, in constancy and force, like that which would lead us to add even one item of useful information to the stock of those who are to look for their bread to the cultivation of the soil.—*Plough, Loom and Anvil.*

CURRENTS—RASPBERRIES.—Set these bushes in good soil, and manure them liberally with a good compost of forest leaves, rotten wood, ashes, salt, lime, bone dust and muck. No fermentable manure should be applied. Let the soil be kept open and free from weeds, and the surface covered with straw, and fruit will be produced in almost any quantity desired.—*Germanstown Telegraph.*

CHARCOAL IN CISTERNS.—A writer in the *Horticulturist* says, that six quarts of charcoal, nicely pulverised, and put into a cistern of the capacity of fifteen hogsheads, will make the water perfectly sweet at any time. Well worth its trial.

Domestic Economy.

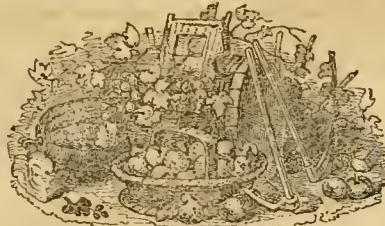
DAIRY MANAGEMENT.

We could never admit any excuse as sufficient to justify any man who keeps even one cow in not having an abundance of *milk* at least, if not of butter, for a family of moderate size. Every Farmer should provide, if only for a few of his best cows, a good *warm* shelter, abundance of litter for a *clean dry bed*, and of suitable food. The cow that won't pay, with such shelter and keep, for a quart of corn-meal a day, and a few turnips, or cabbages, or carrots, or beets, made into a good warm mess, to be given twice a day, with an abundance of cut straw—such a cow is not worth keeping; and he who has such an one, or two or three or more, and will not so provide for them, is not worthy to be called a Farmer, and deserves to have his table served without milk or butter, and, what is still worse, with a dirty table cloth and a dull carver.

As I believe the management of milch cows to be superior here to that in any part of England, it may be interesting to tell you how I manage mine, and the quantity of produce I obtain weekly. I have a boiler containing about 40 gallons, and into it I put about 50 lbs. of turnips, a considerable quantity of water, and about 12 lbs of straw cut into chaff, and this is boiled for about two hours, when it becomes a dark nasty looking mess; one half of this is taken out into two tuhs, and whilst warm 1½ lbs. of bean or pea-meal is stirred into each, and then given to each cow at about 110 deg. of heat. That which is left in the boiler remains till morning, and if well covered up is still warm enough for use: it is then mixed with the pea or bean-meal, as before, and given to the cows at break of day. This, with hay *quantum suff.*, constitutes their daily diet; and I get about 6½ lbs. of butter from each cow. I omitted to say I have only two cows. The butter produced in this way has no taste of turnips, and the avidity with which the cows eat this boiled mess is a good criterion of its value. When given to the cows, it should be thin and sloppy.—*Mark Lane Express.*

HORSE SHOEING.—The following remarks are from the pen of Mr. Miles, Veterinary Surgeon to the Queen of England's Life Guards and author of several valuable veterinary works.

The shoes of the horse should be of equal thickness throughout, with a flat ground surface, as those with high heels, which asinine smiths make in imitation of their own, are dangerously absurd. The toe which ought to be raised is thus lowered, and nature's plan reversed, which elevates the point in order to avoid obstructions. The web should be wide, and of the same width throughout, instead of being pinched in, because the Vulcan operator likes to see the shoe well set off at the heels. This is both unphilosophical and detrimental; it deceives the eye of man, and injures the foot of the horse. The *outer* edge of the foot rests on the inner edge of the shoe, and the remaining width of the web projects beyond the hoof; so that the master who thinks his horse has a good open foot, only has to be proud of a bad open shoe, which both conceals deformities underneath, and invites with open arms a bad road to come and do its worst. The heels are made bare just where the navicular joint is most exposed; and if that be inflamed, what must the agony be when the unprotected foot treads on a sharp flint? The horse falls suddenly lame, or drops as if he had been shot—phrases in much too common use to require explanation; and small is the pity which the suffering animal meets with from man, who, having first destroyed the use of his victim's feet, abuses him because he cannot go, and imputes "grogginess" to him as a crime, as if he were in liquor like a groom, and not in agony.



Horticultural Department.

Pomological Remarks.

Early in the present century several French gentlemen in Philadelphia imported from the land of their nativity a number of Pear Trees of varieties which, at that period, enjoyed the highest reputation. Among these kinds were the Brown Beurre, Chau montelle, Colmar, Doyenne Gris, St. Germain, and many others with which the markets of Paris were then abundantly supplied. The trees were planted at their country seats, in the vicinity of the city.—After the lapse of some years they came into bearing. But great was their disappointment, on finding the quality of the fruit altogether inferior to that which the same varieties possessed in their own country.—This inferiority in quality was attributed, by them, to our soil and climate. Others, among whom were the leading nurserymen of Philadelphia, very naturally imbibed the notion that these varieties had been over-rated, and that they really did not possess the intrinsic merit that had been ascribed to them. In consequence of this opinion, they viewed, with distrust and suspicion, all fruits, however highly extolled, with which they were not familiar. Instead, therefore, of testing the value of the new kinds, which shortly afterwards made their appearance, from Belgium, France, and England, they at once determined to have nothing to do with them. On this account, Pennsylvania did not keep pace with the improvements in Pomology; she fell behind the times.—Within a few years, however, a view, more in accordance with the American character, has rapidly been gaining an ascendancy. And now, there is a growing disposition to become acquainted with all of the new varieties of alleged merit, by subjecting them to a rigid scrutiny, and recommending such as, on impartial trial, are found to possess qualities deserving commendation. This change of sentiment has resulted in the introduction into Pennsylvania of a number of new fruits fully equal, nay superior to the old kinds even in their palmiest days. Such are the Bartlett or Williams' Bon Cretien, Beurre Bosc, Beurre d'Anjou, Beurre d'Aremberg, Doyenne Boussois, Duchess d'Angouleme, Duchess d'Orleans, Flemish Beauty, Fondante d'Automne, Glout Moreeau, Golden Beurre of Bilbea, Louise Bonne de Jersey, Paradise d'Automne, Rostiezer, St. Andre, Urbaniste, and many other foreign varieties. Still the greater

number of these introduced from abroad do not sustain the high character heralded on their advent, and which many of them still sustain in their native land. This circumstance has induced American Pomologists to direct their attention with more favor to the fruits that originate in our own country.

Already the United States has produced a number of kinds of great excellency. Some of these have found their way to foreign countries where their merit is unhesitatingly acknowledged. It is not my purpose, at this time, to enter into a detailed account of our native Fruits. On the present occasion I shall merely designate the names of a few of them, and the States to which they owe their origin.

To New York are we indebted for the Bloodgood, Canandaigua, Columbia, Frederika Bremer, Lawrence, Museadine, Onondaga, Osland's Summer, Oswego Buerre, Sheldon and Stevens' Genesee pears,—the Early Joe, Esopus Spitzenberg, Hawley, Jonathan, Ladies Sweeting, Melon, Northern Spy, Newtown Pippin, Swaar, and Wagener apples,—the Columbia, Jefferson, Lawrence's Favorite, and Washington plums.

Massachusetts is the birth-place of the Andrews, Cabot, Cross, Cushing, Dearborn's Seedling, Dix, Harvard, Heatheat, and Johonnot pears,—the Baldwin, Benoni, Hubbardston Nonesueh, Lyscom, Porter, and Roxbury Russet apples.

Rhode Island presents us with the Abbot, Capsheaf, Knight's (R. I.) Seedling, Pratt, Westcott, and Wilkinson pears—Peek's Pleasant, and Rhode Island Greening apples.

Connecticut has given us the Howell, and the late Gov. Edward's, Calhoun, Citron, Dallas, Elizabeth and Henrietta pears,—and the Chandler apple.

Most of the other States have likewise originated fruits of excellent quality.

As might have been expected, Pennsylvania has not withheld her quota of fine Native Fruits. Her Seckel is universally acknowledged to be the Prince of Pears. The parent tree is still in existence, standing on the Girard Estate, now the property of the City of Philadelphia, within two or three miles of the town; and continues to yield its annual crop of luscious fruit. Scarcely inferior to the Seckel, is one of her offspring, the Ott, raised by Mr. Samuel Ott, of Montgomery County. Possessing the same high and peculiar flavor as its parent, its period of maturity is at a different season of the year. Instead of being an autumn, it is a summer variety, and proudly challenges competition with any known summer pear.—The Moyamensing is another Pennsylvania summer pear of excellent quality. Besides the three now mentioned, Pennsylvania has given origin to the Brandywine, Chapman, Chaneillor, Eshleman, Feaster, Kerper, Kingsessing, Lodge, Pennsylvania, Petre, and Tyson,—and several other pears of a quality at least equal to nine-tenths of those we receive from abroad. Of the Plums which have originated in our

State, we will only mention, at this time, Huling's Superb, a cling of fine flavor and large size,—the Gen. Hand, one of the largest of all plums,—and the Cleavenger, a blue, free, oval plum, of fair flavor, and some six inches in circumference. A single Pennsylvania peach, only, will be named, the Susquehanna, a native of Harrisburg; it is a free, yellow, September fruit of good flavor, and sometimes measuring a foot in circumference. Specimens of this noble peach, preserved in spirits, are in the possession of Mr. Cleavenger, Superintendent of the Public School, at the N. E. corner of 12th and Locust sts., where they may be seen. Pennsylvania has also produced a number of apples, some of which are of much excellence. In the list are included the Brenneman, Crawford, Fallenwalder, Jefferies, Klaproth, Lacquier, Miller, Republican Pippin, Smokehouse, Summer Sweet Paradise, Townsend, Winter Sweet Paradise, &c.

From investigations recently made in the vicinity of Philadelphia by the Fruit Committee of our Horticultural Society, it is believed there are many valuable fruits in this State, entirely unknown beyond their original locality. These, it is to be hoped, the FARM JOURNAL will be the means of bringing into notice. To aid in accomplishing the same object, the Pennsylvania Horticultural Society would also be happy, at all times, to receive, by the most expeditious conveyance, scions and specimens of any valuable native fruits from the different sections of the State.

Scions of six new Pennsylvania apples and two new pears have just been sent from Berks county, through Mr. Robert Kilaington, of this city. The fruit I have not yet seen; specimens, however, will probably be forwarded during the present season.

W. D. BRINCKLE, M. D.

Philadelphia, April, 1851.

The Kitchen and Flower Garden.

MR. SPANGLER:—We hail with ecstacies and delight the very handsome aspect of the Penn'a Farm Journal. There is not a State in the Union so celebrated for the intellectual capacity of its Farmers, as the Keystone State, and we doubt not that your field of contributors will yield to your readers a golden harvest. As there may be some of your readers that would relish a well supplied table of articles differing from beef, bread, potatoes and shanghaes, we venture to throw out a few hints for the improvement of the Garden. The name itself associates with it pleasing anticipation, and from its culture properly attended you will realize a tenfold return.

Those who have been actively engaged in the garden have now all their early crops above ground, and are preparing ground for Lima beans, that should be planted in rich, light, mellow soil in hills 4 feet apart. Plant the bean on its edge, with the eye towards the ground; cover lightly, choose dry warm weather for the planting, give them poles from 8 to

10 feet high. For market purposes they are a very profitable crop.

Plant Snap short, or bush beans early in May, and every two weeks thereafter, till the middle of July. Sow a full crop of beets for the table and a full crop of mangold wurtzel for the winter stock. The best garden beets for winter use, are the long blood and the raddish beet. The latter has obtained the first premium at the Pennsylvania Horticultural Society the past three years in succession. Plant in drills 18 inches apart and the seeds dropped every 4 to 6 inches in the row. When they are up, thin them out to 6 inches apart—mangold wurtzel to 9 inches apart.

Sow a full crop of carrots. We prefer keeping the seed in moist sand two days before sowing; it thereby vegetates at once for family use. The Horn carrot is the richest. For field culture the Long orange for light soil, and the Altringham for heavy soils are to be preferred.

Parsnips are an indispensable vegetable, being in perfection during the early spring months, when other vegetables are scarce. They produce a very heavy crop and are readily eaten by cows and pigs. Our stock of that description, now have them daily, and some to spare to our neighbors. Every gardener should sow half an ounce at least, of Salsify or vegetable oyster. Sow in shallow drills 9 inches apart, and thin out the plants to 3 inches in the row.

Early corn is a very important auxilliary to the Table. Plant at once, Adams extra early for a first crop, and the early sugar, eight rowed for the second and succeeding crops. Sow Brocoli of the early purple and early white sorts. Transplant them about the end of June or first week of July for heading. Cut in the fall and early in the winter.

Melons are a very agreeable luxury. Sow a patch of the netted citron; and of the water melon, sow the mountain sprout, a very superior variety. Prepare rich ground for egg plant and tomatoes which may be planted safely about the middle of May.—Many fail in growing their egg plant seed and the failure is attributed to bad seed. That may occasionally be so, but not always. The greatest error is in sowing deep. I have seen two men sow seed out of the same bag, on the same day, and in the same hotbed. The one vegetated finely, and the other did not produce one plant for twenty seeds sown. Nature does not dig a hole and deposit her seeds, they are all surface sown—merely covered and pressed down with rain or the snow of winter. The great secret of successful planting consists in plunging the roots into a puddle of clay or mud made to the consistency of thin mush, and in this state plant them. With such treatment if the plant is alive and has root it will be sure to grow.

Flowers.—There is no embellishment that so much adorns a residence as these emblems of purity and innocence. The columns of the portico and piazza

appear more rural when clothed with verdure. The jasmine, the monthly clematis and climbing monthly roses are all very appropriate. Of Roses the following six are fine monthly climbing sorts:

White Microphylla, Phillipart, pink; Fellenberg, red; Janne de prey, buff; Infant de Ajacio, crimson; and Glory of Rosamond, scarlet. For monthly bush roses select Hermosa, pink; Souvenir, blush; Cels, blush & pink; Luxemborg, buff; Louis Phillippe, crimson; Queen of Lombardy, deep rose; Lyomais, rose; Saffrana, yellow buff; Devonensis, creamy white; and Isabel, pure white. These will furnish a succession of bloom from May till December, and can be procured from any respectable Florist for a trifling amount. Add to the above a dollars worth of choice Flower seeds, including Mignonette, German Aster, Russian ten week stocks, Phlox Drummondii, Blue Grove, Love Sweet Alyssum, &c. Plant the roses in fresh ground, well manured. Sow the seeds very thinly in light rich soil made very fine. Sow the seeds on the surface, rake them evenly, press the soil with the back of the spade. Keep clean of weeds and your labors will be crowned with success.

Rosedale, April, 1851.

R. BURST.

The Cultivation of the Pear on the Quince Stock.

MR. EDITOR:—The cultivation of the Pear on the Quince stock, is now attracting more attention than at any former period, and large importations are annually made from Europe. Our own nursery men are preparing to supply the demand, and give us the advantage of growing our native varieties, which are unequalled in point of hardihood, flavour and productiveness.

Presuming that many of your readers are interested in the growing of choice fruits, I wish to call their attention to the advantages possessed by this stock under *proper* management. It has been asserted that the pear on the quince, is short-lived. Fortunately this is mere assertion, not sustained by facts. The prominent objection to the quince stock is, that it is liable to be attacked by the "borer" in common with apples. It is well known, that the quince propagates by cuttings with the greatest facility, producing from the part inserted, numerous fibres, and the older the wood, the more readily it roots. Advantage has been taken of this, to plant the stock some five or six inches below the surface of the earth. Thus planted, it is exempt from attack, and the quince roots to the junction with the pear, giving additional thrift and support to the tree.

The quince grows well in almost any soil, but thrives best in a damp situation; and to be successfully grown, requires an annual application of well-rotted manure two or three inches in depth, and in quantity proportionate to the size of the tree. It may be applied in the month of November, on the surface of the earth, and by spring, what remains can be turned under with the spade. The application of manure

directly to the roots of trees, especially to those just planted, is a most pernicious practice, and very often fatal to the tree.

The merits of this stock are—*First*, It comes very early into bearing, producing a fair crop of fruit the third year from the bud.

Second, It adds greatly to the size and flavour of the fruit. Indeed the contrast between the fruit grown on the pear stock, and that grown on the quince, is almost incredible, as regards both size and flavour, and many of your readers if shown a Seckel pear, a Bartlett or a Beurre du roi (the deteriorated Virgalien) grown on this stock, would scarcely recognise them.

Third, The limited space required to grow the trees; which seldom attain an altitude beyond twenty feet, thereby giving facility for collecting the fruit without injury.

Fourth, It transplants with certainty, without checking the fruiting qualities of the tree. As an instance, in March I transplanted a Buerre Diel pear tree on the quince stock; it was then showing flower-buds—the following September I sent the fruit to the Horticultural Society's Exhibition, where it received a premium. The trees were about six feet high nearly *en quenouille* or cone shaped.

It has also been asserted that the pear or quince is not adapted to orchard purposes. I think time and experience will prove the assertion an error. It is certain, the French and Belgians have used it, and are now using it most extensively for orchards, and find their profit in it. We do not claim for this stock that it will produce the quantity of fruit that the pear stock will, but we do claim, that from a given number of square yards under cultivation, it will produce a greater weight of fruit and of better quality. The French fruit growers have almost invariably adopted the conical or quenouille style of training, and plant the trees in rows eight or ten feet apart.

Fortunes have been realized from the cultivation of the peach; at best but a very uncertain crop, and under the most favorable circumstances, a fruit which decays within a week after ripening. The tree itself is of short duration, not existing beyond a period of ten years under the best management, and thousands of peach trees in the orchards of New Jersey are exhausted in half that time; whereas, we can point to pears on the quince stock twenty years of age, producing regularly, heavy crops of fruit, and yet they do not exhibit the first symptoms of decay. Added to which, the superior keeping qualities, and the immense variety of this delicious fruit, succeeding each other from July to April, renders it worthy the attention of every cultivator of the soil.

Our climate is every way adapted to the culture of the pear on this stock, and we hope to see the day when orchards not "few and far between" will amply repay in a pecuniary point of view, the enterprising husbandman.

JAMES D. FULTON.

Philadelphia, April, 1851.

Horticultural Societies.

Proceedings of the Pennsylvania Horticultural Society.

The stated monthly meeting of this Society occurred on Tuesday evening, April 15th, 1851, and was held in the Chinese Saloon, Philadelphia.

The President in the chair. These periodical occasions are of such a character, that individuals of all dispositions,—the aged or youthful, the sedate or gay, the more plain and fashionable can meet and admire the beauties of nature in her most attractive attire; and generally speaking, the Hall is crowded with the elite of the city; but owing to the unfavorable state of the weather, at this time it was less so. Yet those in attendance expressed themselves highly pleased with the beauty of the exhibition, indeed it would be surprising if they failed to be so, when the choicest flowering plants of six green houses and the culinary productions of many hot beds, contributed to their gratification.

A few only of the most interesting plants from each collection will be noticed. Among those from the collection of Frederick Linnig were the *Gardenia Stanleyana* of recent introduction—a plant of prostrate habit and symmetrical form, throwing up slender flowers from five to six inches long, of a dark red color, expanding into a trumpet shaped limb of a light pink hue, delicately striped with dark red.—*Francisea hydrangea formis* a species bearing fine clusters of blue flowers in the axils of the branches; and *Columnaria Scheidiana*, presenting many stems, with numerous speckled fuscous personate flowers, arranged singly at the axils of the leaves. Of those from the green house of Peter Mackenzie—were *Silene rosea gracea* and *Crepis Drummondii*, new and shown for the first time, plants of a delicate habit and interesting; beautiful Pansies and a fine display of Camellias. Of the latter—a flower of his seedling of this year, called "Jenny Lind," a gem of pure white distinctly striped with rich pink, petals round and entire full to the centre, was deservedly admired. Of those from Robt. Buist's green house were—a fine specimen of a new and undescribed plant in full bloom, from California, allied to *Arbutus Pimelia spectabilis*, a pretty plant; fragrant and rich Hyacinths and beautiful Pelargonia. In the contribution from Miss Gratz were a fine specimen of *Campanula nobilis* bearing large blue bell flowers along its branches—a handsome plant; Showy Azaleas, a flowering *Bryophyllum ealyceum*, Pelargonia and Fuchsiae. Among those in A. M. Eastwick's collection—were a new species allied to *Justicia*, five Azaleas and Hyacinths. James Ritchie's embraced a selection of the choicest Roses. James Gowen's gardener presented cut flowers of beautiful Ranunculus.

Apples constituted the only fruit shown yet possessing interest—James Jackson, of Quakertown, Bucks co.—a seedling of much merit. Dr. Brinckle's specimens which he received from Charles Carpenter, Petty's Island, Lake Erie, called "Carpenter's No. 2," from A. Fahnestock, Syracuse, N. Y. the "Northern Spy," and John Perkins exhibited the Monmouth Pippin and Tewkesbury Winter Blush.

Of vegetables—among those of a large contribution from Joseph Ripka, Manayunk were—Mushrooms, Cauliflowers, Asparagus, Rhubarb, Celeria, and Leeks. On Miss Gratz's table—Cauliflowers, Cucumbers, Endive, Radishes, etc. From the garden of the Insane Hospital were remarkably fine head Lettuce and Radishes. Samuel C. Ford's gardener, fine large cu-

umbers and Isaac B. Baxter—Rhubarb and fine Asparagus.

The following premiums were awarded, viz:—For the best Everblooming Roses, to James Ritchie; for the best Pansies, to Peter Mackenzie; for the second best Pansies, to James Ritchie; for the best and most interesting collection of plants in pots, to Thomas Meehan, gardener, to A. M. Eastwick; for the second best, to Robert Scott, foreman to Robert Buist; for the third best, to John Gallagher, gardener to Miss Gratz, and a special premium of three dollars, to John Polluck, gardener, for three fine plants.

For the best four specimens of Cucumbers, to P. Devine gardener to S. C. Ford; for the best Cauliflower, three heads to Thos. Meghran, gardener to Joseph Ripka; for the best Rhubarb to the same; for the second best, to Isaac B. Baxter: for the best display of vegetables, by an amateur gardener to Thos. Meghran; for the second best, to John Gallagher, gardener to Miss Gratz; and a special premium of two dollars to John Riley, gardener to Insane Hospital, for a fine display.

A vote of thanks was accorded to Dr. John T. Sharpless for the present of a package of culinary vegetable seeds, obtained by him in Cairo, Egypt.

Members Elected: Samuel S. Haldeman to honorary and corresponding membership. And to resident membership, Joshua Jeanes, Edw. L. Parker, Robt. Newlin, Joseph McIlhenny, John Miller, P. Wychoff and A. B. Cummings.

On motion, adjourned.

THO. P. JAMES,
Recording Secretary.

We are indebted to Thomas P. James, Esq., Secretary of the Pennsylvania Horticultural Society, for the above detailed report of the proceedings of that association. They will be found to possess much interest to every lover of Horticulture, and as the reports for our Journal, will be more full and complete than those formerly given, our readers will be kept fully advised of the transactions of the Society.

We shall also publish the monthly schedule of Premiums offered by the Pennsylvania Horticultural Society, with the day and hour of meeting. We are requested to state that the premiums are open for competition to all persons, whether members of the Society or otherwise. For the benefit of those who may not have not an opportunity of obtaining a copy of the regulations of the Society in regard to the distribution of Premiums, we will in our next number give them entire; so that persons desirous of competing for prizes, will be enabled to understand the necessary preliminaries.

SCHEDULE OF PREMIUMS

*Offered by the Pennsylvania Horticultural Society,
Philadelphia, for the month of May.*

At the stated meeting on the 20th, at 8 o'clock, P. M.

CAMELLIA.—For the best American Seedling, exhibited to the appropriate Committee from December to May, inclusive, Silver Medal.

PELARGONIUMS.—For the best, six named varieties, in pots, 2 00

For the 2d best do. do. 1 00

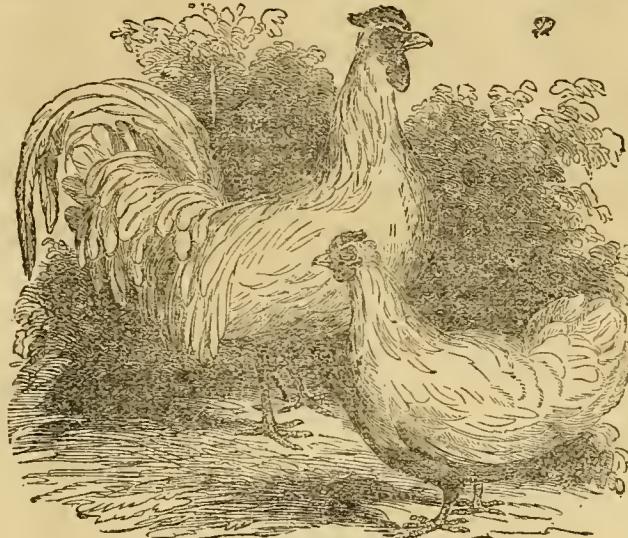
ROSES, Perpetual.—For the best, six named varieties, in pots, 2 00

For the second best, do. do. 1 00

Rose.—For the best American Seedling, ever-blooming, in a pot, Bronze Medal.

TULIPS.—For the best single, eight named var.	2 00	PEAS.—For the best, half a peck,	2 00
For the 2d best do.	1 00	For the 2d best do.	1 00
PEARS.—For the best six named specimens,	2 00	POTATOES.—For the best, ten pounds,	2 00
APPLES.—For the best, three named varieties,		For the 2d best do.	1 00
four specimens of each,	2 00		
CUCUMBERS.—For the best, six specimens,	2 00		
RHUBARB.—For the best, twelve stalks,	2 00		
For the 2d best do.	1 00		
ASPARAGUS.—For the best twenty-four stalks,	2 00		
For the 2d best do. do.	1 00		

CEMENT FOR HOUSEHOLD USE.—Take new milk, half a pint, and curdle with sharp vinegar; separate the whey and mix with the curd, the whites of five eggs, beat well; add fine quick lime, and mix till you have a ductile paste or putty. It will stop cracks, and is fire and water proof.



THE DORKING FOWL.

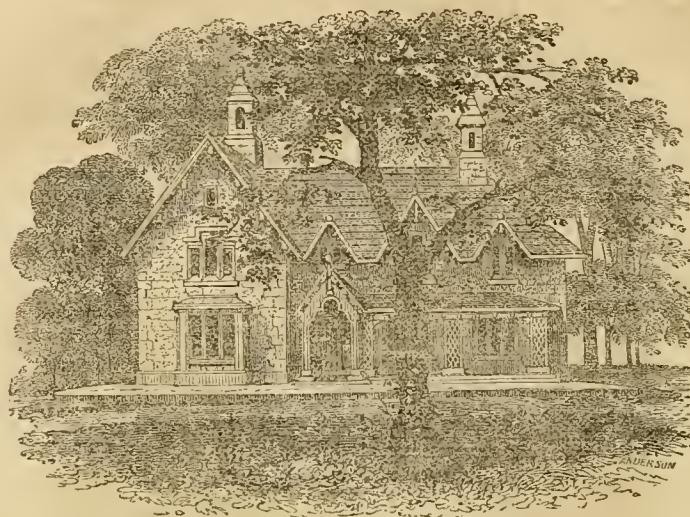
For those who wish to stock their poultry yards with fowls of most desirable shape and size, clothed in rich and variegated plumage, and, not expecting perfection, are willing to overlook one or two other points, the Dorkings are the breed, above all others to be selected. They are larger-bodied, and of better proportions, according to their size, than any other variety I have yet seen, their bodies being rather long, plump, and well-fleshed; and the breeder, as well as the housewife, generally beholds with delight their short legs, full, broad breasts, little waste in offal, and the large quantity of good profitable flesh, the flavor and appearance of which is inferior to none.

The cocks are magnificent. The most gorgeous hues are frequently lavished upon them, which their large size and peculiarly square-built form display to great advantage. The original Dorkings are said to have been white, but such are now seldom to be seen. During all my rambles, in various parts of the country, only on one or two occasions did I meet with pure-white birds. In all, however, as far as my knowledge extended, when pure-blooded, more or less white prevailed; but the cloudings, and markings of the plumage were unlimited. Many were marked with bands, or bars, of ashy-grey, running into each other at their paler margins. Some had the hackles of the neck white, with a tinge of yellow, and the body of a darker or brownish-red, intermixed irregularly with white; while others were beautifully variegated with white, black, green, and brown, or were nearly uniform in their shades from a light-cream color to almost black.

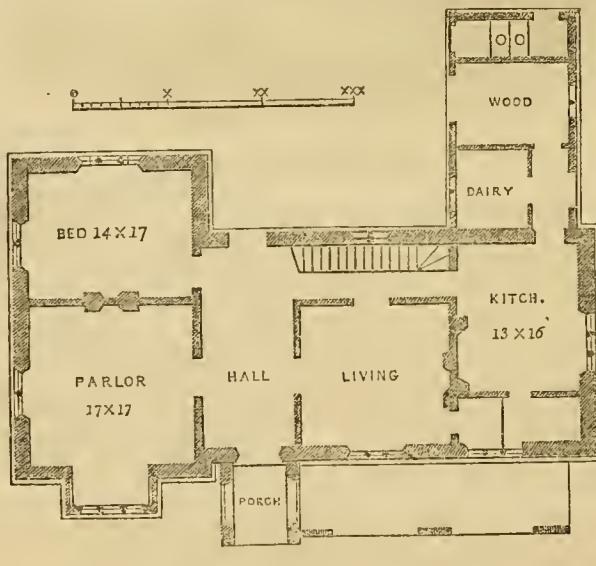
Both the cocks and hens are usually short-legged, thickly-feathered, having fine, delicate heads, with single, double, or large, flat rose-like combs, which, when they are in high health, add very much to their appearance, particularly if seen in the bright rays of the sun. Their legs are invariably white, or flesh-colored, each often armed with one or more toe-like claws; and, instead of four toes to each foot, a fifth one protrudes from the same root as the heel toe in the common varieties, which is generally regarded as a distinguishing mark of the breed.

The weight of the Dorkings, at maturity, varies from five to eight pounds, and full-grown capons have been known to weigh ten or twelve. Their eggs are usually of a clear white, but sometimes of an ashy-grey color, rather large in size, very much rounded at both ends, and of an excellent flavor. The hens are not "everlasting layers," although they produce eggs in reasonable abundance, but at due or convenient intervals they manifest a desire to sit, in which they often most strenuously persevere. In this respect, they are steady and good mothers when the little ones appear. They are better adapted than any other fowl, except the great Malay, to hatch superabundant turkey's eggs. Their size and bulk enable them to afford warmth and shelter to the turkey poult for a long time. For the same reason, spare goose eggs may safely be entrusted to their motherly care. Their young, in this country, have thus far proved very hardy and easy to rear. The chicks are generally brownish-yellow, with a broad, brown stripe down the middle of the back, and a narrow one on each side.

VILLA FARM HOUSE.



[The above plate of a *Villa Farm House* has been obligingly furnished us by the publishers of *Downing's Architecture of Country Houses*. It forms one of the numerous illustrations of this popular work.



This dwelling is intended for the country house of a farmer of wealth, who wishes to give his dwelling a dignified and superior character, without indulging in too much ornament.

The exterior, as shown in the elevation, is varied and picturesque, expressive of solidity, convenience, comfort, and a considerable degree of elegance. The bay-window and veranda, taken in connection with the construction, bestow a villa-like character on the design, while the large kitchen chimney and the absence of all tracery to the gables, indicate a country house of less pretension than the highly ornamental cottage or villa.

ACCOMMODATION. The plan of the first floor shows an entrance hall, 10 feet wide. On either side of these are the two principal apartments—the living-room and the parlor. By connecting these rooms and the hall with large sliding doors, the whole can be thrown into one handsome suite on any occasion, and the arrangement will always add to the coolness and airiness of the rooms in summer.

At the end of the entrance hall is a staircase passage 6½ feet wide, leading to the kitchen, dairy or milk-room, wood-house, etc.

The kitchen has a large pantry, and the living-room a small one, both lighted by one of the front windows.

THE FARM JOURNAL.

Sub-Editor's Department.

OUR TERMS--READ THEM.

In order that the *FARM JOURNAL* may be placed within the reach of every one who feels interested in the progress of Agriculture, we ask attention to the following terms:—

SINGLE COPIES,	—	\$1 00 Per Annum.
FIVE	—	4 00 "
TEN	—	7 50 "
TWENTY	—	15 00 "

It is not required that all papers in a club should be sent to one office. We will mail them (in wrappers,) to as many different offices as may be necessary. We make this arrangement in order that persons residing in different neighborhoods may unite, and form large clubs, and thus secure the "JOURNAL" at the very lowest club rates.

Specimen copies of the *JOURNAL* will be sent on application, *Post-paid*, to the publisher.

Post Masters, are by law, authorised to remit subscription money to the publisher, *free of postage*.—Particular attention is asked to this fact, as it will save expense both to subscribers and publisher.

Our Terms are *CASH IN ADVANCE*. The exceedingly low rate at which the *Journal* is furnished renders this imperative. Subscriptions may be sent at our risk, and money at par where subscribers reside, will be taken. Where the sum to be sent is large we prefer that a draft should be procured, if possible.

Subscribers and *Post Masters* are invited to act as Agents. A receipt will always be sent with the first number of the copy subscribed for.

All letters must be addressed, *post paid*, to the publisher.

A. M. SPANGLER,
Lancaster, Pa.

Organ of the State Society.

It will be seen by the annexed resolutions which we copy from the proceedings of the Executive Committee of the Pennsylvania State Agricultural Society, at their meeting at Harrisburg on Tuesday, April 29, that our *Journal* has been *unanimously adopted* as the *Organ* of the Society. An endorsement from so high a source, is certainly most complimentary and gratifying to us, and in return for it, we can only promise that no effort of ours will be spared to render the "Farm Journal" worthy this generous expression of favor.

If our friends will now give us their promised assistance, we shall be enabled to redeem our promise.

Resolved, That we deem the establishment and success of an Agricultural Journal published in Pennsylvania as essential to the proper exposition of the principles of agriculture as practised in our State.

Resolved, That we approve of the plan of the "Pennsylvania Farm Journal," published in the city of Lancaster, by A. M. Spangler and edited by Prof. S. S. Haldeman: that for the present it be adopted as the organ of the State Society: and that farmers and all others interested in the subject of agriculture be advised to patronize it and contribute information to its columns.

As we are desirous of having the *Journal* ready for delivery to subscribers on the first of the month, we hope our correspondents will send in their articles in time.

State Agricultural Exhibition.

The Executive Committee of the Pennsylvania Agricultural Society, at their meeting on Tuesday the 29th ult., appointed the first exhibition of the State Society to be held at Harrisburg, in the ensuing October, as will be seen by reference to their proceedings published in this number. Our agricultural friends at Harrisburg and the citizens of Dauphin, appear to have been fully awake upon this subject, having pledged themselves to provide all the suitable conveniences of lands and buildings, with fifteen hundred dollars, certainly, and five hundred dollars more, if necessary, to defray expenses. While we may regret that our City and County did not offer stronger inducements to secure the important advantage of having the exhibition in our midst, we cannot but concede to the men of Dauphin the proper reward of their enterprize and spirit. Let us try to do better in future.

In the mean time, Lancaster County must bestir herself to prepare for the exhibition. Her farmers know they have a character abroad; that the fame of their agriculture is widely diffused, and that, for fertility, prosperity, and practical skill, Lancaster County stands second to no other district or section in the Commonwealth. It is right and proper, that their share, in the coming exhibition, should not fall short of their position and character. We do not entertain a doubt, that this county can make, with moderate efforts, a splendid contribution to the State Agricultural Fair. We have seen a drove of 50 fat bullocks pass through our streets eastward, within ten days, which were fattened by Christian Herr, of Manor township, and which would have graced any agricultural show in the United States. There are in the County many fine cattle of improved English breeds—some of which have been further improved by crossings with our native stock. Horses we are sure can be furnished from this County, equal to any in beauty and blood, to be seen elsewhere, not to speak of the majestic Conestoga draft-horse, which is so widely celebrated. Our farmers, too, have liberally patronized the various agricultural machines and implements which have been invented of late years for facilitating and saving labor. Many of these have been introduced and approved among them, and may form very interesting objects at the exhibition.

As to the products of her soil, they are as various as the soil itself. There can be no want of fine specimens in this department; and nothing can be a legitimate subject of exhibition, than those fruits of the earth, which are the principal care of the agriculturist. We are also of opinion, that Lancaster County, in the article of arboreal fruits—of apples and pears especially, can make an admirable display. We happen to know, that an English farmer who arrived in this country about three years ago, was

struck with amazement, when he first saw the variety, abundance and beauty of the apples, which were brought to our market. In addition to these matters, specimens of our native timber, planed to show the grain, indigenous plants and herbs, remarkable for medicinal qualities, or their elegance—the products of household industry and magnificence, may be curious and interesting objects at the exhibition.

But we would extend this appeal to other counties. Our State Society, in this material and important measure, must be sustained—not awkwardly, but zealously and with correspondent spirit. The whole agricultural interest of the State, is deeply involved in it. The first State Agricultural Exhibition in Pennsylvania, will constitute an epoch. Neighboring States will send their delegates, in no small number, to visit our Agricultural Fair. Think how mortifying to every Pennsylvanian, would be their disappointment on finding a deficient and meagre exhibition! Again; consider what a chilling effect, it would have upon the ardour of the friends of agriculture throughout the State. From the assembling of the State Convention to the present time, the cause has advanced with a full and flowing sail. If the step just taken by the executive committee be met as it should, throughout the Commonwealth, then the cause is safe; but if every thing be left to the efforts of one, two, or three counties, and the exhibition turn out a failure, who would answer for the result? It pains us to think of the possibility. The friends of the cause, must be up and doing. We are assured, that nothing will be omitted at Harrisburg, to make the arrangements for the exhibition complete, by the selection of the most suitable grounds, the construction of the proper enclosures and shelters, and the adoption of useful regulations for the convenience and comfort of all who may attend as visitors or contributors. It remains for the farmers and those who feel an interest in the improvement of agriculture, in every part of our State, to begin and continue their preparations for this grand exhibition. With an earnest effort on their part, we feel safe in predicting that the fair will redound to the credit of our good Commonwealth, and give a wonderful impetus to the cause of Agriculture within her borders.

Enclosing Receipts.

We designed enclosing a receipt in each number of the Journal sent to subscribers, but have since been informed that this cannot be done without subjecting the person receiving it to heavy postage. In order to obviate the difficulty in part, we shall always forward receipts to the persons sending club lists, &c.

The April Number.

In anticipation of an extensive circulation, a very large edition of our first number was printed. New subscribers may therefore confidently rely upon being supplied with it.

Farmers! Write for the Journal.

We herewith extend a cordial and hearty invitation to practical farmers to favor us with communications upon all subjects pertaining to Agriculture, Horticulture, &c. One fact is worth a dozen theories; and if the Farm Journal is destined to prosper, it can only do so through the assistance of those who are able to communicate the results of their own observation and experience. The fact that an important truth is presented in plain language, does not in the slightest degree detract from its value, and no reader of sense will reject it because of the simplicity of style with which it is written. So far from being an objection, an easy, familiar style is most to be desired, and for this reason it has been a special object with us to avoid learned technicalities as far as possible.

For these and other reasons which might be given, we earnestly request our practical farmers to write for the Journal. Through them, alone, can we hope to render it the true exponent of Pennsylvania farming, an object of primary importance; and the leading one with us.

Thanks.

We are indebted to the following gentlemen for handsome Club lists. Hon. G. R. McFarland, Hollidaysburg, Blair co.; C. Titzel, Mechanicsburg, Cumberland co.; J. S. Keller, Owigsburg, Schuylkill co.; B. S. Russel, Towanda, Bradford co.; Hon. Geo. W. Woodward, Wilkesbarre, Luzerne co.; Hon. Luther Kidder, do; James Gowen, Esq., Philadelphia co.; David Taggart, Northumberland; Isaac Markley, Esq., Norristown; L. Burchfield, Mifflintown; Dr. E. D. Crawford, Thompsonstown, Juniata co.; J. M. Cogley, Lewistown, Mifflin co.; David Coble, Shepherdstown, Cumberland co. and to many other kind friends whose influence has been exerted in behalf of the Journal. Will not others who desire the success of our enterprise, follow their example. A very trifling amount of effort will secure like results whenever put forth. With the honest consciousness that we are laboring for the general good, we respectfully solicit the aid and influence of every friend of agriculture in the State.

Delay.

In consequence of disappointment by our paper maker, the publication of our present number has been delayed several days later than we intended.—Our arrangements are now such, that we hope to be able to have the subsequent numbers ready by the first of the month; a fact to which we ask the special attention of our correspondents.

Advertisements.

To accommodate our advertising friends without encroaching upon the space devoted to reading matter, we have added two extra pages, to the advertisements to which we ask the attention of our readers.

What a little effort can accomplish.

It has probably never occurred to the friends of the Farm Journal, how small an amount of individual effort is necessary to place it beyond the possibility of failure. There are, we believe, sixty-four counties in Pennsylvania. Now, if each county will furnish *one hundred subscribers*, we shall be enabled to present them with a journal, which will truly and faithfully represent the agricultural interests of the State, and prove a welcome and valued visitor to every household.

Will not our friends in each county lend a helping hand to this good cause? We have secured the good will and services of a number of Pennsylvania's ablest contributors, and every mail adds to this number. Unless our assurances are deceptive, every department of our Journal will be ably filled. We shall spare no expense to render its illustrations and typographical appearance fully equal to any of our contemporaries elsewhere, whilst the exceedingly low rates at which we furnish it, places it within the reach of every farmer's means, however limited they may be.

Shall we have *one hundred subscribers* from each county in the State? Shall we have the means for making our Journal all that the Pennsylvania Farmers could desire, or shall we, after having expended our capital, sit down with the mortifying consciousness that our efforts have proven unavailing?

The encouragement which we have already received forbids us to anticipate anything but complete success, and relying, therefore, upon the assistance of our friends we shall persevere in our efforts to render the Journal worthy the patronage of all who feel interested in the prosperity of Pennsylvania agriculture.

 *Hussey's Reaping, Mowing and Hemp Cutting Machine* is attracting much attention now, and should command more. So far as our knowledge goes, it is decidedly the best in use, although several others claim for theirs, advantages which it does not possess. A more general introduction of this Machine into the principal Agricultural Districts of Pennsylvania, would doubtless remove the prejudices which many farmers now entertain in regard to improved Farming Implements. Lancaster County furnishes a fine field for testing its good qualities, and Mr. Hussey will do himself and the public a favor by placing one or more of them in such places as will afford the grain growers of this section an opportunity of ascertaining thoroughly the principles upon which it is operated. See advertisement.

 On the second page of the cover will be found a description of *Croasdale's Patent Seed Drill and Broad Cast Sower*, a new implement of which from the favorable representations received, we are induced to think well. Wherever used, it has been found to answer a most admirable purpose.

Our New Dress.

It will be seen that the present number of the Journal appears in an entire new dress. The generous encouragement extended to our first number dissipated every doubt of success, and in order to merit this hearty approval, we concluded to clothe it in such a dress as would render it worthy of preservation and fit for binding. The new type, which are really beautiful, are from the well known foundry of L. Johnson & Co., No. 6, Sansom St., Philadelphia.

Notices of the Press.

The exceedingly kind manner in which the Newspaper Press of our own and other States has noticed the first number of the Farm Journal, places us under deep obligations. The best return that we can make, will be to endeavor to deserve the commendations they have so freely bestowed.

The Potato Rot.

We copy from the Germantown Telegraph extracts from several articles on the subject of the "Potato Rot," by Tracy E. Waller, who it will be seen, confidently asserts, that he has a remedy for the disease. Our experience has not enabled us to say whether the plan pursued and recommended by Mr. W. is likely to prove effectual; but from the fact that he has so much confidence in it himself, we shall be glad to see a fair trial given it, and the results made known. Since the offer of a reward by the State of Massachusetts of *ten thousand dollars* to the person who discovers an effectual remedy for this disease of the Potato, a host of claimants have entered the lists as competitors for the prize. Of course many of the suggestions are worthless, yet we may hope, that some plan will eventually be discovered, which will prove entirely successful.

"Now I undertake to say, and will hereafter *prove*, to the satisfaction of every farmer in the Union, if he will apply the test which I am about to propose, that the disease originates in the deficiency of certain ingredients in the *soil*. The fact that millions of bushels (notwithstanding the loss of one-third or more of the crop by the rot,) of as good potatoes are grown every year in the United States as were ever raised before the appearance of the disease, affords to my mind, without more positive proof, sufficient reason to disbelieve the statement recently made, that the plant dies like an animal, in consequence of "*the feebleness of old age*." I shall not ask the Legislature of our State to give me \$10,000 for my discovery. I shall be amply rewarded if, on a fair and efficient trial, it will settle the question. I shall not be alone if it be proved that I am mistaken; and as my remedy will add to the fertility of the soil in proportion to the extent it may be applied, no one can lose anything by the trial of it.

I therefore assert, as my firm belief, that *Charcoal, properly applied, will always, and everywhere, prevent the disease known as the "Potato Rot."*

The use of charcoal as a fertilizer is not a new thing, though it is only within the few last years that agriculturists have taken much notice of it. Yet it is apparent that but few farmers in this country under-

stand its value—its *necessity* to the soil. Prof. J. P. Mapes, the able editor of the *Working Farmer*, has advocated its use more, I think, than any other man in our country. But even he has not spoken of it to my knowledge, as a means of preventing the potato rot. Nor can I learn that any other person has. A writer in the *American Agriculturist*, January, 1851, in speaking of the injury to the crops in some sections of New York and New Jersey, last year, says of his own crop, "I mixed charcoal with the compost of a small portion of the ground planted: where this was done there was no rot."

This is the second year that I have entertained the views I am now advancing; and so far as I have had opportunity to test them, I have reason to believe that my labor will not be in vain. I would therefore recommend farmers this season (it being now so near planting time) to try it on a small scale, and proceed in the following manner: Take one-eighth of an acre in a field to be planted, either in rows through the field or on one side of it—ground that was plowed last fall or early this spring will be the best; spread the compost (as directed to be prepared in my article last week,) evenly over it, and plow it in. Strike out the rows in the ordinary manner—take good sound potatoes, middling size, cut them in half lengthwise, so that each part will have an equal portion of the eye or seed end, and place them in the furrows ent side down, one foot apart. The rows should be at least three feet apart. Then throw a handful of charcoal dust over each piece, and cover with a hoe. Cultivate during the season as you do the rest of the field, and immediately after they have blossomed, go through the rows with a bag or basket of charcoal dust, and sprinkle a handful on each hill at the root of the vines. Repeat this again about three weeks before the tubers have attained their ordinary growth.

The alkalies in the compost are necessary as food for the plant, but they will not prevent the rot; that is the office of the charcoal. The chemical and physiological action will be explained in the treatise I contemplate publishing next fall or winter. The quantity of charcoal, (and perhaps in some respect the mode of applying it,) as I before mentioned, may have to be varied.

On account of the lateness of the season, I would suggest that farmers who may be induced to try the remedy I have proposed, prepare at once a compost for one-eighth of an acre (which will be sufficient for a trial this year,) as follows:

	250	pounds.
Bone dust, or best guano,	25	"
Salt,	15	"
One large wagon load of wet and well-rotted barnyard manure.		

Mix well together and let it lay until time to plant, say two or three weeks.

Next fall I shall be happy to hear by letter or otherwise from all who make a trial of the remedy.—The labor and expense attending it will be light and easy. The compost which I would recommend when an acre or more is to be planted, will differ somewhat from that advised in last week's paper; and I hope to be able to give some desirable information on this interesting subject for the use of farmers next year. I shall be satisfied for the present if am instrumental by these articles in eliciting a more thorough investigation into the nature of the potato disease.

TRACY E. WALLER.

Rising Sun, Philadelphia co. Pa.

Agriculture and Geology.

The passage of the act appropriating eight thousand annually, to the publication of the final report on the geology of our noble State, will be hailed with satisfaction, by every friend of Scientific Agriculture. This sum is to be appropriated annually for four years, in order that the most careful scrutiny may be given the work as it goes through the press; and also to ensure the completion of it within the stipulated time, in the style required by the nature of the publication, and with a proper regard to the reputation of the State. When completed, it will contain several hundred maps, sections, views, &c., together of important revisions with valuable locations in which mining operations have opened numerous avenues to knowledge, not accessible at the time when the original survey was made.

From an article prepared for the first number of the *Farm Journal*, but which was not received in time for publication, we make the following extracts, showing the important relations existing between the publication of the Geological Report and the interests of Agriculture.—[Ed.]

"Of the contributions which such a report must make to the benefit of our mineral interests, it would be easy to multiply examples; but we confine ourselves to its influence upon the *agriculture* of Pennsylvania; a subject more directly connected with the plan of this Journal. It is now well understood by all intelligent men, that the theory and practice of farming rests upon a knowledge of the soils to be farmed; and it is the business of the geologist to ascertain the locality, extent, and peculiar general characteristics of each principal variety of soil. How thoroughly this may be done will appear upon an inspection of any good geological map. The science of chemistry, going hand in hand with practice in the field, has been discovering and explaining the manner in which the different crops receive their nourishment—what kinds of food they require—what proportion of such food each soil contains—when artificial supplies are needed, and what kind of aid is to be given, whether by carrying other soils, lime, stable manure or other materials, or by turning up sub-soils, &c.: and with the help of geology the methods of drawing and watering have been developed and reduced to rule. With a good geological map before us there would be little difficulty in preparing such directions for the farming population of each locality, as would advance our agriculture to a degree not dreamed of by a majority of our citizens. If we are to have (as we ought) a State School in which the sons of farmers may obtain an acquaintance with the results of experiments and observation in this department, and where they may enjoy facilities equal to those now open to persons of other professions, it will be essential to have a good representation of our various soils, the boundaries of which are very intricate. This must be the basis of our elementary education. Some time will be needed after the publication of the report, to prepare suitable abstracts for the young farmers; and this consideration should hasten the conclusion of the work."

With respect to a general estimate of our agricultural wealth, and the natural routes to the great markets, no man who has not personally examined every county of the State can be well informed without the aid of a geological map and particular description."

Book Notices.

Seventeenth Annual Report of the Superintendent of Common Schools. By A. L. Russell, Superintendent: Harrisburg, 1851. pp. 75.

The Governor of Pennsylvania, with a just appreciation of the wants of the State, recommended the formation of a State Agricultural Department in his annual message, and the Secretary of State takes another step in the same direction in recommending the formation of a State Agricultural Institution upon a plan which he sketches at some length, but which we will not follow in its details. According to this plan, there is to be accommodation for five hundred pupils, of which three hundred are to be selected from the public schools, and educated at the expense of the State, during a period of *six years* from the age of twelve.

One thousand acres of land are proposed for the institution, affording "a sufficient area for the practice of tillage, after deducting space for *woodlands, orchards*, pleasure grounds, yards and buildings. Its surface should be diversified by *hill and meadow*, adapted, in its several points, to the best culture, not only of *grain*, but of *vegetables and fruits*, and to the raising of all kinds of *stock*." A *library*, and *cabinets* in the various departments of science are included in the plan.

Eight professors are proposed for the following subjects:

1. English Literature and Mental Philosophy, *ex-officio* President of the Faculty, with two assistants.
2. General History and Political Economy, with one assistant.
3. Mathematics, with two assistants.
4. Practical Farming and Rural Architecture, with six assistants.
5. Agricultural and general Chemistry, Geology, and Botany, with two assistants.
6. Natural Philosophy, Mechanics, and Engineering, with two assistants.
7. Comparative Anatomy, and Physician.
8. German Language, with one assistant.

The assistants amount to sixteen, six of which "should be females."

In the second grade of French schools, according to Prof. Hitchcock's Report, there are *six* professors as follows:—1, Rural Economy. 2, Agriculture. 3, Zootechny, or economy of animals. 4, Sylviculture (forest trees) and botany. 5, Chemistry, Physics, and agricultural Geology. 6, Rural Engineering.

In the French Agronomic Institution, there are *nine* professors, of the following subjects: 1, Rural economy and legislation. 2, Agriculture. 3, Zootechny. 4, Sylviculture. 5, Rural engineering, leveling, roads, architecture, and mechanics applied to implements. 6, Terrestrial physics, (geology, &c.) and meteorology. 7, Agricultural Chemistry. 8, Botany and vegetable physiology. 9, Applied Zoology. There are in addition, a Prefect of studies; a

curator of the collections; a librarian; and an overseer of studies.

Of the German schools, one at Brunswick has *thirteen* professors as follows:—1, Physics and general chemistry. 2, Pure mathematics, geometry and linear drawing. 3, Mineralogy and zoology (geology?) 4. Architecture. 5, Transcendental mathematics. 6, Rural economy. 7, Applied chemistry. 8, Mechanical technology. 9, Natural history. 10, Raising horses, diseases, &c., of domestic animals. 11, Veterinary medicine. 12, Forest science. 13, Architecture. (There are two professors in this branch.) There are extensive cabinets, laboratories, a museum, botanic garden, &c.

The plan proposed by President Hitchcock for the State of Massachusetts, is worthy of attention, as it is based upon an extensive examination of European models. For a farm of moderate size he recommends from 100 to 200 acres, with *six* professors of the following subjects:—1, Horticulture, sylviculture and rural legislation, who should be chairman or president. 2, Agriculture. 3, Elementary and agricultural chemistry. 4, Natural history, geology, and curator of the collections. 5, Anatomy, physiology, and veterinary medicine and surgery. 6, Mathematics of agriculture, such as farm accounts, irrigation, draining, surveying, leveling, roads, bridges, &c.—"This appears to me to be the smallest number of professors with which an institution can be respectable and useful, even at its commencement. *Two* years is named as the duration of this course.

The least learned and most inefficient member of a college is often made its president, a rule which should be departed from in an agricultural institution, because there is no reason why this officer should instruct in one branch rather than in another; and it might happen that the professor of Agriculture or Chemistry would have better administrative talents than the professor of Literature or Rural economy.

Mr. Russell omits zoology and the veterinary art, and he assigns comparative anatomy to the physician, instead of dividing it (with physiology) between the two former branches; because the general subject of these sciences is connected with zoology, whilst their special application belongs to the economy, hygiene, and diseases of domestic animals.

If a modification of Mr. Russell's plan were adopted, the best pupils of the common schools would be admitted, so that the lower grades of instruction would not be included; and if German and French were well taught in the literary course, and a *diploma* granted to the graduates, a large number of college students would prefer it. German and French are more useful than Greek and Latin, and as much knowledge of the latter might be acquired in a course extending through six months, as would be useful for etymological purposes.

It is a humiliating fact, that in nine-tenths of the American Colleges, notwithstanding their pretensions

even this amount of Greek and Latin is not taught, it being extremely rare to find a graduate who can deduce anything beyond the most obvious words.

As an agricultural course of education in its various ramifications would be adapted to the wants of the population; and as it would include studies which are not appreciated in the literary colleges; it would exercise a wholesome influence upon the latter, and compel them to teach modern science; whilst the medical colleges would be under the necessity of including studies which are deemed essential to the profession of medicine in Europe.

The American Beekeepers' Manuel; being a practical treatise on the history and domestic economy of the honey bee, embracing a full illustration of the subject, with the most approved methods of managing this insect through every branch of its culture.
By T. B. Miner. Embellished by 35 fine engravings, New York: C. M. Saxton, 1851, pp. 350.

This is the fourth edition of one of Mr. Saxton's useful publications, and the more worthy of attention, because it is the most extensive American work on the subject, founded upon practical observation. It is rather strange that there should be so few observers of the habits of bees in this country, the subject being an interesting one which has attracted much attention in Europe. This is evident from the fact that at the death of the distinguished entomologist, Professor Audouin, his library was found to contain 74 different treatises on the honey-bee, and at least 150 on the silk-worm and silk culture.

We have no practical knowledge of bees, having been prevented from getting them on account of kialmia (commonly called laurel) growing in our vicinity, a plant which produces poisonous honey. We cannot therefore vouch for the practical part of Mr. Miner's book, although he writes like one who understands his subject. Some of his information will not be appreciated, as when he announces his ability to "look as far into a millstone as any man,"—p. 143; and asserts that the antennae of bees are "the organs of smell;"—p. 339; and that "the eyes are situated upon the upper surface of the head,"—these organs being upon the sides of the head, the three *stemmatu* being above. The notion that the black bees sometimes seen owe their color to age, is not supported by the general facts furnished by the insect world. Insects require light to give them their natural color, but old individuals are very apt to fade.

Mr. Miner states that there is "not the slightest" organic difference between the various kind of workers, whilst Huber asserts that the wax-workers have the abdomen more dilated. The labors of the fathers of apiculture should not be rashly condemned as our author is inclined to do on p. 56. Among the authors there mentioned are Hunter, one of the discoverers of the origin of wax; and Schirach, the dis-

coverer of the mode of forming a queen out of the larva of a worker.

Discrepancies are to be found in the accounts of various authors, some of which are to be accounted for by differences of country temperature, or location. Mr. Miner agrees with those who assert that the bee moth enters the hive, whilst one of the Patent Office Reports states that the eggs are laid in external crevices, and that the larva enters the hive after being hatched. Both parties may be correct under certain circumstances.

In works of this kind a list of the best authorities should be given, with the title and dates of the books published, and the names of the principal discoverers should be stated. It is especially desirable to have American publications and reprints mentioned, including articles in the periodicals.

The American Poultry Yard; comprising the origin, history and description of the breeds of Domestic Poultry; with complete directions for their breeding, crossing, rearing, fattening, &c., by D. J. BROWNE, author of the SYLVA AMERICANA. New York: C. M. Saxton, pp. 324.

If our author's reputation were to rest upon his botanical compilation (SYLVA AMERICANA) under a borrowed title, or upon the value of his pages devoted to scientific disquisition, we might recommend that his book should be placed with those of authors ambitious of enlightening the public upon subjects the principles of which they do not understand. The publisher states that from Mr. Browne's "intimate knowledge of the history and habits of our domestic animals, having devoted, probably, more attention to the subject, as a whole, by reading and observation, than *any other individual in the country*, the task of preparing this work was assigned to him." From this amount of knowledge we might have expected an original work, but this is not so much a compilation of materials as a wholesale adoption of the labor and composition of others, particularly the work of the Rev. E. S. Dixon, whose name should have stood upon the title-page. The affected candor in mentioning in his Preface the names of the authors of whom he has made "free use" will hardly excuse him with those who know the extent to which he has transcribed many pages of history, observations, facts, and even theoretical views without credit. He asserts that he possesses the rare book "ORTUS SANITATIS" in the very words used by Dixon in stating that *he* has it.

The volume is illustrated with figures of the various fowls described, and as many readers will not care about knowing who the authors of the various incorporated parts may be, it will answer their purpose, as the selections are carefully made. Several representations of the chick in the egg are given, and the author states that this "has been so fully described by many writers, from Aristotle down to Reaumur, that I need merely refer the reader to

them." Yet this subject was in its infancy until a recent period.

Samuel Allen adds an Appendix, in which he treats of the comparative merits of different breeds of fowls; profits of poultry raising; the egg trade and poultry statistics.

Apart from the defects we have pointed out, this is a useful volume, which may be much improved in an another edition.

Cattle. By W. Youatt and W. C. L. Martin; being a treatise on their breeds, Management and Diseases, comprising a full history of the various races, their origin, breeding, and merits; their capacity for beef and milk; the nature and treatment of their diseases, &c., &c., with 100 illustrations.—Edited by A. Stevens, New York: C. M. Saxton, 1851, pp. 470.

The names of Youatt and Martin are a sufficient guarantee of the value of their writings, the former having been eminently practical as well as possessing a sound judgment upon farm animals, whilst Mr. Martin stands high as a naturalist.

The American editor has added the homeopathic treatment as adopted by Gunther; and although this does not detract from the intrinsic merits of the book, it will be doubtless hard to find a calf sufficiently imaginative to be benefitted by it.

We are favored by Mr. Saxton with a number of the illustrations of this work, one of which, with the article it illustrates, was given upon p. 21, although the credit due in such cases was inadvertently omitted.

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April—tf

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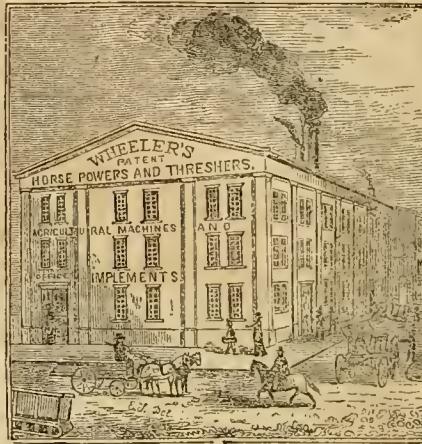
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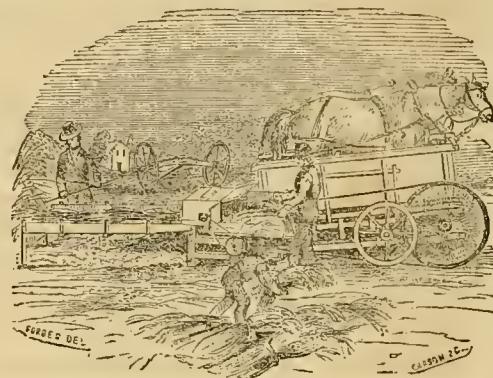
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Wheeler's Patent Railway, Chain Horse Powers, and Overshot Threshers and Separators, will receive their prompt attention.

The large and increasing demand for these Machines has induced the Proprietors to erect a New and Spacious Manufactory, and otherwise extend their means of promptly filling orders.—Their Powers and Threshers have been sold in nearly every State in the Union, during the past year, and their superiority has been acknowledged by numerous testimonials, not only from Agricultural Societies but from persons who have used them. They have been awarded the First Premiums at all the principal Fairs where they have been exhibited in operation, including the Pennsylvania State Fair, the Provincial Fair of Upper Canada, and the Michigan and Ohio State Fairs, together with numerous County Exhibitions in the different States.

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Machines will be shipped to order to any part of the United States or the Canadas, ~~and~~ and warranted to give satisfaction to the purchaser, or they may be returned within sixty days.

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PENNSYLVANIA FARM JOURNAL

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S. S. HALDEMAN, Editor.

Eutomology, No. 2.

BY THE EDITOR.

CLYTUS ROBINIE.—In Pennsylvania in the month of June, this handsome insect may be met with upon locust trees (*ROBINIA PSEUDACACIA*), in the branches

of which they lived as a larva. Its length (fig. 1) varies from half an inch to nearly nine-tenths of an inch. The color is black, with transverse yellow bands, those upon the elytra being somewhat irregular. The under parts are varied with yellow, the legs are reddish, and the antennæ reddish brown.

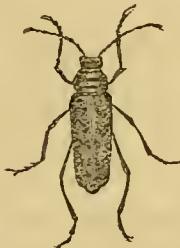


FIG. 1.

The female deposits her eggs in the irregularities of the bark, and the young when hatched, penetrates into the interior to feed upon the wood. The smaller branches are generally attacked, and presence of the larva may be known by the wood-dust about the aperture where it entered, the cuttings being for some time ejected here. But the most prominent is the swelling of the branch at the point of attack, which becomes weakened, and is often broken off by storms; or dies, so that new shoots must be thrown out below. From these causes the tree becomes disfigured and materially injured. The annexed figure (2) represents a fragment of a locust branch attacked by this insect.



FIG. 2. as the larva continues its depredations after the wood has been cut, it frequently does much damage; and we have known a large lot of hoop-poles

to be destroyed by them. The figure (3) represents a piece of one of these poles split to exhibit the

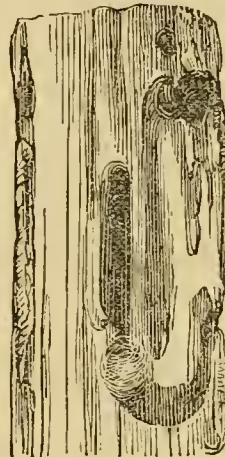


FIG. 3.

burrows of the larva, and their place of exit through the bark. A plug of woody fibres is observable in one of the burrows, similar to those made by the *ELAPHIDION*.

Dr. T. W. Harris, in his "Insects injurious to Vegetation," states on the authority of Gen. Dearborn, that the grubs of this species are full grown by the 20th of July, and the perfect insects leave the tree early in September, in Massachusetts. From this it is evident, that as they appear at different times in various parts of the country, the proper season for cutting wood infested by them must vary. Hoop-poles should be cut before the eggs are laid, or they should be soaked some time in water. This would kill the larvæ, not only of *Clytus*, but of another and much smaller insect, which burrows beneath, and loosens the bark, and penetrates and destroys the wood of hoops, long after the barrel has been finished and applied to its proper use.

Dr. Harris recommends whitewashing the trunks of trees to prevent the insects from affixing their eggs; he also recommends catching the adults and drown-

ing them in bottles of water by children—to be repeated year after year during the period of their appearance; but it is very evident that this cannot be extensively practised.

CLYTUS CAMPESTRIS of Olivier, (or C. TERMINANS FABRICIUS) figure 4, is about three-fifths of an inch long, of a dark brown color, the elytra variegated with ashy down, and having two yellow quadrants near the base. The thorax is rough above, with four yellow spots in the corners, arranged in a square. The thighs are thickened

FIG. 4. towards the end. The perfect insect appears in Pennsylvania in May and June, and occurs from Massachusetts to Carolina and Mississippi.

The larva does considerable damage to fallen chestnut timber, particularly that which is cut for fencing rails. The younger larvæ burrow between the bark and wood, but the older ones penetrate into the wood, forming holes which the rain can enter.

Paine's Oxygen Light.

Mr. Paine has promised the editor of the Worcester (Mass.) Spy, that in the course of a week he will illuminate the editor's office by his new mode of producing light. The oxygen light is a new discovery of Mr. Paine, which the Spy says is a process of catalysing the oxygen of the atmosphere, and rendering it highly luminiferous, at a mere nominal expense, without the cost of machinery, or any other apparatus than an air receiver, capable of holding common air.

In this new discovery of Mr. Paine oxygen is to be catalysed (that is, united with the vapor of turpentine) to form light. One mode of doing this is as follows: The turpentine is to be mixed with other ingredients (then called *burning fluid*, &c.) and put into an apparatus technically called a *lamp*, which terminates above with a vertical longitudinally perforated metallic cylinder, through which one extremity of a loosely spun piece of cotton (technically called a *wick*) is passed into the catalysing fluid, the other extremity being left exposed at the top of the apparatus or *lamp*, where it soon becomes saturated by capillary attraction, and is ready for action. If flame be now applied to the exposed wick, a complete catalysis of the oxygen of the air will take place, and a fine light will be the result. The cost of the apparatus is "nominal," and of the oxygen nothing, so that the expense of the *burning fluid* alone need be taken into account.

A second mode of using the air for lighting purposes, is to pass the rays of the sun through it; but as this is only adapted for daylight, the old mode of extracting "sunbeams from cucumbers" will have to be resorted to for night use, unless a *squash* is found to be more luminous,—and in our early days we actually saw a luminous pumpkin. This, like Paine's late ingenious contrivance, had been formed "into an air receiver capable of holding common air," and was



carved so as to resemble a skull, the mouth being armed with a formidable set of teeth like those of a cross-cut saw. The light came from the eyes and mouth, and was probably due to a union of oxygen and tallow. This light is quite safe, unlike Mr. Paine's hat full of hydrogen, which exploded "like a six-pounder."

Obituary.

SAMUEL GEORGE MORTON, M. D. a distinguished naturalist and physician of Philadelphia, died on the 15th of May, aged 53. Besides various medical and scientific works, he was the author of *Crania Americana* and *Crania Aegyptiaca*, in which these portions of the human race are characterised from the skulls.

Dr. Morton was a person of many virtues, of mild manners, a lover of peace and concord, a liberal supporter of science, a sincere friend, and the ready adviser of the uninitiated upon their entrance into the domain of science, when a little assistance and encouragement is of so much value. All lovers or cultivators of science, in whatever sphere of life they moved, were welcomed with equal hospitality, so that it was unusual to spend an evening at his house without meeting one or more cultivators of science from various parts of the United States or Europe.

At the period of his death, Dr. Morton was president of the Academy of Natural Science, Philadelphia, to the interests of which he devoted much of his time, and where (next to his bereaved family) his loss will be most deeply felt.

Fine Sheep.

Mr. Benjamin Hood, of Williston, Chester county, informs us that last winter he disposed of three sheep to Mr. Paul, of Philadelphia, whose age and weight were as follows:

One, three years and ten months old, weighed alive, 322 pounds; neatly dressed, 234 pounds. Twins, a year younger, live weight, 286 and 285 pounds; dead and dressed, 202 and 192 pounds.

Mr. Hood also states that he sheared twelve sheep, the average weight of the fleeces being something more than eleven pounds. The heaviest was 14½ pounds. His stock is comprised mainly of the Cots-wold and Leicester breeds.

With such evidences of highly successful sheep raising in Pennsylvania, why should it not claim more attention than has heretofore been given it.

WONDERFUL!—We learn from an advertisement in the Ledger of May 24, that a person with eyes like balls of fire, who had lost the use of his back, and whose head was laid on his shoulder, obtained a bottle of *Panacea*, "and before he had used it he could hold his head erect!"

THE quantity of ashes left by a ton of wheat straw is sometimes as much as three hundred and sixty pounds.

Communications.

Farmers' Clubs.

MR. EDITOR:—It is impossible to overrate the value of education to the farmer, or, indeed, to any citizen of our free country, whatever may be his profession or calling. I have read with pleasure the essays of your correspondents, on this subject. There is much in their tone that I like, though I may not be able to concur in all their views. The interest which they are adapted to excite in the cause of agricultural improvement, if it should not lead to the foundation of a university or colleges for the exclusive instruction of farmers, may, at least, induce our legislators to devise some plan for adding, to our existing institutions of learning, professorships charged with the duty, and endowed with the means of imparting effective instruction in the branches particularly related to the cultivation and improvement of the soil. Any such plan must, of course, be materially different from the schemes of manual labor, which have occasionally been attempted and always failed.

With respect to education, there are some considerations, that ought not to be overlooked. In the first place, most of the tuition bestowed upon the youthful mind, must always, without regard to the destination of the pupil, have for its special object the formation of sound mental habits and the right development of the affections. Again, although we sometimes speak of the science of agriculture, yet there is no peculiar science of that sort. It is true, there are many sciences which may and should be made subsidiary to the practice of agriculture:—such as chemistry, geology, botany, entomology, &c., and the application of these sciences to the analysis of soils and vegetable productions, and the protection of plants and fruits, has contributed more than any thing else of late years, to its improvement. Moreover, in speaking of progress,—it should not be forgotten, that there is a progress *downward* as well as *upward*; and that the former is not less to be avoided, than the latter is to be sought.

Let us not cast away anything that is good in our present institutions, but rather improve upon the foundations we have. What we want, is more instruction and better. Let us persuade our agricultural friends to avail themselves of the numerous seminaries and schools within their reach, to give their sons the superior education which these institutions will supply. Let us persuade those who have the power and direction, to infuse into the instruction more of a scientific character, more that has relation to the business of life, and especially the business of agriculture.

But something may be done immediately, and without waiting for another generation. There is manifestly a spirit abroad propitious to agricultural improvement. Let us try to make it available. Our communities are conveniently divided, territorially,

into townships. Are there not, in every township, a sufficient number of persons interested in farming, to form a club—a farmers' club—who will meet every month, or two months, at some central place, for mutual instruction,—who will make up a small fund to purchase agricultural works for the use of the members—bring with them specimens, vegetable or mineral, of whatever may be rare or remarkable, which they may have found in their neighborhood,—relate their experience and observations and trials of various methods of farming, with the results, and have a brief record made and kept of all that may be deemed useful and worthy of preservation?

By this means, township lyceums might be established all over the country, to the great advantage of the present, as well as of the rising generation, and would constitute the best medium for the diffusion of knowledge in agriculture from the great centres—the universities, colleges, and State Agricultural Society—through all the ramifications of county and district associations, acting reciprocally, too, by returning to those central reservoirs, notices of the various experiments and observations, made from time to time, in the several townships, of which records should be kept by the clubs.

In commencing a farmers' club, it is of consequence to avoid attempting too much. Let there be no overstrained effort. Many useful purposes may be accomplished without requiring much time or pecuniary outlay.

1. With respect to a library, a good beginning would be a subscription, for the use of the club, to the nearest agricultural periodical works. These are so cheap that the contribution—where there were but a few members—would be a mere trifle. To this might be added the volumes containing the former numbers; then other agricultural works; such as, the Farmers and Planters Encyclopedia, Colman's Practical Agriculture, Liebig's Organic Chemistry of Agriculture and Physiology, &c., &c.

2. The proceedings of the club, after appointing a chairman and secretary, might consist among other things of the statements by members of such facts as the following, viz:

- a. The average quantity in acres of the farms in their respective neighborhoods.
- b. The number of hands employed in tilling them.
- c. The number of horses, oxen, mules, cattle, sheep, and swine.
- d. The number of fields of particular farms and the rotation of crops.
- e. The relative quantity of woodland, arable, and meadow; and the species of timber.
- f. The nature of the soil—whether limestone, gravel, or slate, &c.
- g. The manures employed, how made or obtained, how used, and with what effect.
- h. The quantity of seed sowed or planted to the acre, the mode and time of sowing, &c. and the yield.
- i. The time of harvesting or securing the crop, and the method of doing it.

5. The various crops or products raised in the respective neighborhoods and their sale.

6. The prices of sales of land, and the wages of labor; and the terms and usages of renting.

These statements might be made orally or in writing. If in writing, they should be numbered and filed; if orally, reduced to writing by the secretary or any member, and the writing numbered and filed.

Besides this, the club might attend, (when time permitted,) to the reading of useful and interesting articles on agriculture from the books of the club, or others, and to the hearing of occasional lectures on agricultural subjects.

3. The chairman or secretary, acting as treasurer, might also take care of the books, papers, and other things belonging to the club.

Such primary associations would thus be easily formed and managed, and could not fail to be productive of benefit to themselves and others. "I have witnessed," says Dr. Higgins in his valuable Report, "the great good done by associations of *practical farmers*, with frequent meetings for the discussion of agricultural subjects, and as great aids to improvement, would recommend their formation in every neighborhood of our State."

A. L. HAYES.

Lancaster, May 14, 1851.

On Deep Ploughing.

MR. EDITOR:—The business of farming differs materially from other pursuits in that it confines one more to his home, and his own broad acres, and allows less leisure to travel and collect from the practice of others hints for his own management, than the merchant, manufacturer, or even mechanic. This disadvantage can only be remedied in one way, by the circulation of agricultural periodicals like the "Farm Journal," which, in fact, are nothing more than the practice and science of good farming recorded in a book, certainly not the less valuable on that account; and thus reaching many a corner of the land otherwise inaccessible. The fatal prejudice against book farming, which is only observations on culture printed instead of spoken, has, in a great measure, passed away, and our practical farmers now find their true interests to consist not only in reading agricultural journals, but in writing for them.

Among other innovations on old systems brought about in this way, the heading of this article is one. I have somewhere seen the observation that there is some excuse for the yearly renter of a farm to plough shallow, but none for the owner of the soil. The one wants to get all he can, even at the expense of the and, the latter permanently to improve, while cropping it. I doubt whether it is to the advantage of either renter or owner to plough shallow.

In the spring of 1844, I broke up a stiff sod for corn, with a heavy plough, (Prouty's 5½) drawn by two yoke of oxen, to the depth of nearly eight inches. I then followed immediately behind with a subsoil plough, which stirred up the subsoil to the depth of

six or seven inches more. After the ploughing and harrowing were finished, a stick could be pushed down in nearly every part of it, to the depth of fourteen or fifteen inches of loose earth. It was well ploughed and the experiment was a fair one. We may remember that that summer was a very dry one. Not only were our pasture fields burnt up and bare, but the summer crops suffered greatly. Cattle were foddered for some time. I went to England in the spring of that year, and did not return till the crop was harvested in the fall. It proved a full average, and I was told it had been a common remark of the neighbors and passers-by, how green and luxuriant it continued through the season, compared with others around it. This was an instance of the benefit of deep ploughing in a dry season, and I hold it would have been equally perceptible in a very wet one.—The depth of soil, would have allowed the superabundant moisture to pass off, and thus relieve the roots of growing crops. In wet or dry seasons, in rich or poor land, I contend for deep ploughing. To be sure, in an exhausted soil, or in a naturally deficient one, very deep ploughing is not to be at once adopted, but the *system* is correct, each year to go a little deeper.

It is surprising to see the practice of many farmers, working for years, ploughing, manuring, and planting but four or five inches deep, fearful of touching the hard yellow substratum. Ask the question, and it will be admitted, that if there was twelve inches of depth as rich as four inches, it would be a fine thing; but how to accomplish this, unless by ploughing and turning it up to the influence of the atmosphere, would be difficult to answer. The larger the source from whence growing crops derive their nutriment, of course the larger the crop. A given amount of surface, representing ten inches deep of good soil, of course supplies more food to plants, than the same amount of surface only four inches deep. A fear is often expressed of burying out of reach by deep ploughing, the shallow surface soil, but the advantage of turning up the hard substratum to the influence of the sun and air and atmospheric gases, and its consequent speedy melioration, is lost sight of. Deep and thorough ploughing, thorough pulverisation of the particles of soil, allowing of the free admission of air between them, coupled with the use of plaster and lime on the surface, and repeated harrowings or stirrings, will soon render productive and profitable a subsoil hitherto valueless, and thus greatly augment the supplies and sources of food for plants.

PASCHELL MORRIS.
West Chester, Pa., 5th mo. 6, 1851.

AMMONIA is regarded by Dr. Hayes as being a poison to plants, though he attaches great value to it as a neutralizing agent to the acids of soils, and as serving to convey other ingredients, such as carbonic acid and the organic acids of soils, into the circulation of plants.

— Agricultural Education.

MR. EDITOR:—I shall again try my hand at turning another furrow of the old, stiff sod we have been attempting lately to break up, and shall begin by iterating the appeal I made in my last, to the friends of agriculture, in behalf of providing a suitable education for the rising generation—the youth of the Rural Districts, who are to occupy the same places we now fill, to till the same fields in which we have toiled, and on whose capabilities will mainly depend the position Pennsylvania is to hold among her sister States of the Union. Would that I could impress upon all, even but a portion of the concern that for years has weighed upon me in regard to the importance of a measure fraught with influences so pervading as to effect every individual in the community, no matter to what class he belongs. Let any one try to reason himself into a belief that he is independent of the consequences, whatever be the condition of the yeomanry, whether enlightened or unenlightened, and if he does not find, on the issue being fairly made, that it is in vain to escape being directly or indirectly within their influences, he is one in a thousand, or rather should say, he is without the pale of well-regulated society. It cannot be denied, however, that the farmers themselves have the most direct interest in the education of their sons, and should be held responsible for the measure, yet it is the duty of all, as well as the interest of all, to see that the means be provided and the end attained—to see in full, that the landed interest is cherished and promoted, not incidentally, but specially and primarily, as the first, great leading and permanent interest of the commonwealth.

If agricultural education be left to the farmers alone, it will, I fear, be retarded, if at all promoted; this is certainly to be regretted, but the apprehension is no less plain than painful to my mind. Their unobtrusive habits, their constant labor and isolated position, stand in the way of even making the discovery that any improvement is needed in farming, as well as unfit them for pushing on a reform, if they perceived the necessity of a change. They, in general, are content to leave things as they are; they follow the same practice in tillage and husbandry that their fathers pursued, and think it good enough for the observance of their sons. This apathy, or content, if you will, is the perpetual bond or chain that binds them to a hard and monotonous servitude at mere labor from boyhood to old age—a condition, did they permit themselves to think rightly about, they would try to avert, in view of the comfort and prosperity of their offspring.

Who among us but must regret the want of science and skill in the varied operations of farming? Have we not toiled with but indifferent success for the want of an agricultural education, and has not the little we have achieved been won by dint of unceasing toil,

through many a long and weary day of plodding drudgery, that depressed the spirit while it bowed the body? What father, though by his practice he may have added to the acres he inherited, or at first began upon, would not desire that with the land, his son should inherit also an education, which, if it did not abridge his labors, (as I aver it would,) would throw around it intellectual rays to brighten his path thro' every scene and season—a mind so cultivated that not only the dews and rains of spring, the fervid heats of summer, but the frosts and snows of winter, would furnish subjects for interesting research and investigation; while his manures, soils, seeds, crops and stock would serve as material for analysis and experiment in his vast laboratory, the farm. Let no one tell me that a farmer so constituted could not raise better crops at less expense, fill his barn and stables from less land, and increase his wealth easier and faster than he who depends solely upon the force of persevering toil, in a system that discards science, provided both were alike honest and faithful. Should not every patriotic citizen, as well as the farmer, aid in providing the means and devising a plan for promoting agricultural education in Pennsylvania?

Having, on a former occasion, suggested farm colleges at appropriate localities, with buildings and farms suitable for the accommodation and training of one hundred to one hundred fifty students to each, I deem it more necessary now, to show the *necessity* for such institutions, than to discuss the merits of arrangement. The expediency of the measure claims precedence, when that shall be conceded, it will then be in place to treat of suitable sites, buildings, teachers and systems of instruction.

Of the necessity of instituting agricultural schools or colleges, wherein shall be taught the theory and practice of tillage and husbandry, upon rational and deducible principles, to supersede the wasteful, unproductive system that so universally prevails, a few observations on the abstract operations of farming must for the present suffice. To attempt showing in detail all the errors, mistakes, misapplications and hap-hazards of farming, as it is, would require much time and more space than can be allotted to an article for a monthly. It would fill a volume to treat even cursorily, of the manure heap, stables and stock, of breeding and feeding, hay, mow and granary, cropping and seeding, garden and orchard, dairy, pasture and soiling, breaking up and laying down with grain and grass.

The neglect to husband manure properly, is almost universal. There are but few, comparatively, who give sufficient attention to the matter, or who understand this important point in husbandry. Suppose the stock on a farm be judiciously fed and attended—the horses and cattle as workers, the cattle, sheep and swine, in view of dairy, breeding, slaughtering, &c.—how much would the whole cost of feeding be

reduced under the management of a skilful husbandman, through his attention to the special matter of manure, with a given stock, on a medium sized farm, than if the careless and wasteful practice prevailed as regards manure, though the same quantity of feed should be consumed? Not less than twenty-five per cent. To arrive at this conclusion, it will be only necessary to observe how the stables and pens are littered and cleaned, where and in what manner the manure heap is kept, to look at the quality as well as the quantity when applied to the land, then to follow up the results on the forthcoming crops, and particularly the condition in which the land is left when the crops are removed; and no intelligent farmer can be at a loss to decide with me, that the estimate I have made in favor of good management, in this single branch of husbandry, is not overrated. If a thorough investigation was made as to the unproductiveness of the land through the want of manure, and the sinking of the value of the land through severe and ill-judged cropping, incapacitating it to maintain a due proportion of stock, with the consequent loss in dairy products, beef, mutton, pork, lard, wool, &c., it would fall but little short of one million of dollars annually in Pennsylvania. Take for instance, the average yield of wheat, which has been stated by some to be no greater than twelve bushels to the acre, and suppose this average can be increased three bushels, which would raise it to fifteen, here then, we have the million of dollars in one product, wheat; but I go farther, and say, that with a prudent management in manure, and a proper application of it to the soil, the average can easily be raised to eighteen bushels to the acre. If the torturing and impoverishing system of breaking up such breadth of land yearly to seed, without affording it sufficient manure to sustain it against exhaustion, is not timely arrested, much of our light soils will, ere long, be doomed to utter sterility.

Another evil worthy of noting, is injudicious cropping, I do not use not use the word in the sense of seeding. I mean by cropping, the proper adaptation of the crop to the quality and character of the soil. The want of knowledge in this particular is attended with serious disappointment to the unskilful farmer, and untold loss to the public. For, be it remembered, the public is made to suffer through every failure in crops, and whether the failure be owing to blight, or to malpractice, it is a calamity equally to be deplored.

There is, perhaps, no one operation on the farm where want of judgment is more palpable than in a misapplication of crops. Almost every common hand upon the farm can plow, plant and sow; reap, gear, haul and spread manure, but how few of those could be found capable of adapting a crop to the soil, or of conducting a judicious rotation? Very few indeed. Not to be irreverent, "Do men gather grapes of thorns

or figs of thistles?" Skilful farmers look to the character as well as the condition of the soil before they seed it, and speculate not only upon the remunerating crop, but upon the effect it will have exerted upon the land after it shall have been taken off. It is incalculable, the loss sustained yearly in the waste of land, seed and labor on crops not worth gathering, by reason of their being raised on a soil uncongenial to their growth or production. To illustrate this: I have seen wheat and timothy sown on a light dry soil, high exposure, while a cold, wet, clayey field on same farm was being seeded to rye and clover—clover alone for mowing and pasturing. I have seen barley sown on a piece of wet, low land, having a subsoil better adapted to raising bricks than barley, while the high gravelly part of same land was actually being sown to oats. The result of these croppings was, as might be expected, a failure. The wheat and timothy should have been put to the field in which the rye and clover were put; and the rye and clover in the field sown to wheat and timothy. The barley, if there existed a necessity for sowing it, should have had the place of the oats, and the oats the place of the barley. The rye lodged, not on account of its weight, for there was scarcely a well filled head in the whole field.—The barley lay an unsightly green mass at the time barley generally was being harvested, without one well filled ear. The fact was, the soil was not calculated to afford the properties required to give strength to the stem or straw, much less to fill the head with seed—the same remark applies to the rye, while the clover suffered as much as either from being out of place. What there was of it, was of bad quality, while the quantity was not one-third of a crop, for the cold, wet ground it stood in, affected so injuriously as it was with the frosts in winter, which made the whole field one continuous board of frozen mud, on being thawed in the spring, left the roots of the clover to be spewed out, high and dry upon the surface. Here there was some twenty acres of fine land put to a worse use than had it been thrown out as a common for stray cattle to range in. Now, if much of the land in Pennsylvania is so managed, who can count the loss, and who will not be ready to conclude that it is high time the school master should be abroad—I mean the Agricultural School Master?

Time will not permit me going farther into this subject at present, else I would show how much we lose in dairy products, and root crops, through neglect and bad management. The census of 1840 shows, I think, that we fall short of New York in the products of the dairy, some seven millions of dollars annually, and in potatoes twenty millions of bushels.—Is not this a repreach to Pennsylvania?

Let any reflecting man look at this matter through all its bearings, and he cannot but perceive the vast accession of wealth that is within our reach, through a well-ordered and judicious system of Rural Econo-

my; and then ask himself, would the endowment of agricultural seminaries or colleges be expedient? I take leave to answer for him, that as a mere financial scheme, a better has never been devised at the capitol in Harrisburg. The outlay upon agricultural colleges would, in a few years, be returned to the State in the increase of products ten-fold, increasing and increased fifty, aye one hundred fold! But, be it noted, this is only the farming item—the cash account. The influences which such institutions would exert upon the intelligence of the community, is of vastly more moment, and rises superior to every other consideration.

Respectfully,
JAMES GOWEN.

Mount Airy, 20th May, 1851.

Planting Hedges—Hawthorn vs. Osage Orange.

MR. EDITOR:—The enclosing of plantations by hedges, or live-fences, is a desideratum which has attracted the attention of most of the intelligent agriculturists of the country, during the past twenty years, induced by the growing scarcity, and consequent high price of fencing materials.

Tourists have spoken with rapture of the “neat clipped hedges of Old England,” and certainly the live-fence has been nearly perfected in that country. The hawthorn is the plant best adapted for defensive hedges; in the British Isles, where its use is almost universal, and properly trimmed it is truly formidable.

Frequent attempts to cultivate the Hawthorn in hedgeforms have been made in this country, but the result has been invariably a failure, as regards both the native and foreign varieties. The cause of failure is owing mainly, to the depredation of the grub (*Saperda bivittata*.) The attack commences, as in all the *Pyrus* family at the surface of the ground, the worm perforating the diameter of the tree in all directions, eventually destroying it, and no efficient remedy has yet been discovered, although nostrums in abundance have been proposed. Another frequent cause of failure, is a want of judicious cultivation, indeed a want of cultivation at all—for it appears to be generally understood, even among men claiming to be intelligent, that it is simply required to plant the tree and that in the shortest possible period of time, without regard to its wants and capabilities—thenceforth it is expected to cultivate itself. Certainly this is the only inference that can be drawn, from the manner in which hedge plants are too frequently treated.

These causes have induced the inquiry: What is the best defensive hedge plant, adapted to our climate, and free from depredation?

The Osage Orange (*Maclura aurantiaca*) or Bois D’Arc of the Southwest, is found indigenous in Arkansas and Texas, and during the past five years an immense quantity of the seed has been collected in those countries and distributed over the eastern seaboard, the facility with which it germinates, its easy

culture, great hardihood, and the rapid growth commanding it to the planter, besides it is “fully armed for battle” being provided with numerous, short rigid thorns, that man or beast declines coming in contact with. The whole plant is embued with a lacteous fluid, slightly aerid, and adhesive, which prevents cattle browsing on it. It also retains its foliage, which is a beautiful light green, until sever frosts. It has no enemy of any account—in some situations where the ground mice abound, the young plants are liable to be injured.

Experience points to this plant as the best adapted for defensive hedges, in this country; it is also highly ornamental.

The Maclura is dioecious: that is, the male and female flowers are produced on separate trees. A wonderful display of the power of the pollen or impregnating virus was manifested the past season on the grounds of the Old Landreth nursery. A female Maclura tree produced an abundance of flowers. I procured male flowers from a point four miles distant and scattered them freely over the female tree, the result was the enormous return of forty bushels of fruit, containing sixty-two quarts of sound seed, worth in the Philadelphia market the past winter, four dollars per quart, or \$250. In connection with the above, I should have remarked that the particles of the pollen are so minute, that the naked eye cannot detect them.

To cultivate the Maclura successfully in hedgeform it is not requisite to highly manure the ground intended to be planted—average wheat land is sufficient. The plants should be removed from the nursery with care, (the roots where mutilated with the spade, cut clean with the knife,) and planted ten to twelve inches apart, the ground having been previously dug deep and some two feet in breadth. Immediately after planting, the top of each plant must be cut off to within six inches of the ground, which forces the plant to throw out numerous branches. When the branches have attained the height of six or eight inches, cut off all the tops of said branches, which forces out another set of branches which must be treated precisely in the same manner, using strong hedge shears.—In case a dry season follows the transplantation, an application of manure or litter to the surface surrounding the plant will greatly benefit and prevent evaporation. The Maclura to form a perfect hedge requires clipping twice during the summer, never adding to its height at any one clipping more than six inches. It also requires a close clipping in March, or earlier, of the wood grown after the last summer clip—the object of all this clipping is to render the hedge compact by checking its rapid growth.

JAMES D. FULTON.

Philadelphia, May 20, 1851.

☞ Man is born, not to solve the problems of the Universe, but to find out where the problem begins.

Organization of the Honey Bee, &c.

MR. EDITOR:—Though doubtless as little disposed as yourself to regard the “*American Beekeeper’s Manual*” with special admiration, permit me to say that Miner is correct in the statement that there is “not the slightest difference in the organic structure of the worker bees;” nor are specific duties assigned permanently to different classes of workers. Recent observations and experiments, carefully made, have shown that all workers are, by nature, equally qualified for every branch or subdivision of labor required, and in turn perform it as occasions arise. There is certainly a division of labor during the working season; but there are no *gangs* of laborers, peculiarly organized for particular branches or departments, to whom the appropriate work of each branch is assigned, as a distinct business or duty for life, or even for the season. Even the famous *black-bees*, which have attracted so much notice, and were often described as possessing peculiar characteristics, prove in the end to be organized in no respect differently from their congeners, the common workers. Dr. Alefeld, a distinguished German apriarian and entomologist, lately subjected these bees to minute microscopic examination, and the result was a clear conviction that, in bodily organization, they are precisely similar, in all respects, to the ordinary workers—difference in color constituting the sole distinction.

You are under an erroneous impression, also, when you mention Schirach, as “the discoverer of the mode of forming a queen out of the larva of a worker.” Schirach never professed to have made the discovery; nor is it known by whom it was made. In his treatise on the subject, published in the year 1770, he states that the process has been known for more than twenty years, in Upper Lusatia, but having been kept a secret, it was practiced only by a small number of apriarians. All the merit he claimed was that of having promulgated the discovery, after verifying it by experiment, and simplifying the process. Swammerdam, in his “*Bible of Nature*,” published in 1752, at Leipzig, says that a then living and very intelligent apriarian possessed and had communicated to him, the art of producing queen bees from worker eggs or larva. He also describes the process very minutely and states most of the conditions requisite for its success. Though by some German writers it has been alleged, that the art was known and practiced as early as the year 1735, yet Swammerdam’s account appears to be the earliest published notice of it, and corroborates Schirach’s statement that it had been known for more than twenty years before the time at which he wrote. Schirach himself regarded the discovery as accidental, and as having been made, almost simultaneously, in different districts.

The discovery itself is undoubtedly one of much interest and importance; but as the principles on which success depends were not fully understood until within the last twelve or fifteen years, the process

has not, till quite recently, been availed of in practice, on an extensive scale, with beneficial results.—But since the publication of Dzierzon’s “*Theory and Practice*,” by which most of the mysteries which so long shrouded the natural history of this insect are elucidated and removed, the process has become an essential part of modern improved practical bee-culture, as regulated by scientific principles.

Permit me to say, also, that Miner is not far wrong, in stating that the eyes of the bees “are situated on the upper surface of the head.” Those organs on the sides of the head which have usually been called eyes, are undoubtedly such; but they are not the only organs of vision. The recent microscopical investigations of Professor BARTHE, of Eichstädt, one of the editors of the “*Bienenzzeitung*” demonstrate that what are commonly called *stemmata*, and which are differently placed on the heads of the worker, drone and queen respectively—are in reality eyes, designed and used for specific purposes of vision, in accordance with the peculiar habits and wants of the insect. In the “*Bienenzzeitung*” for January 1, 1851, this question is finally disposed of.

The organs of smell, however, which Miner, singularly enough, supposes may be found in the antennæ, are situated in the face of the bee, below these latter members. The two foramina serving for nostrils, pass through the outer corneous skin; immediately behind which there is spread out a fan-shaped corrugated expansion of the true skin, reticulated by numerous nervures—an arrangement or contrivance evidently constituting the insect’s organs of smell.

Without entering on a critical examination of Miner’s book, as a work “worthy of being called a full practical treatise” on bee-culture, I may advert to a few particulars wherein I conceive his statement to be deceptive or erroneous.

It remains to be proved, for instance, that the queen bee ever deposits the egg in a royal ex-queen cell; or that the larva in such cells are supplied with food other or more pungent than that furnished to the worker brood. According to the more recent observations, the probabilities are against these positions or assumptions. There is reason to believe that the size and perhaps the position of those cells, together with their peculiar construction, allowing entire freedom and perfection of development, are the sole cause why the larva bred and matured therein, emerge as queens, which would have come forth workers if bred in the narrower horizontal cells.

Again,—Mr. Miner alleges that “the two kinds of eggs—for worker and drone bees, namely—are germinated in perfectly distinct and separate bodies, no organic separation exists in the formation of the ovary, as has ever yet been discovered.” This is in direct variance with the results of the latest physiological examinations of the insect. From these it seems to be pretty well settled that the eggs of the queen, as developed in her ovaries, are all originally

of the same kind or character; and that every unfecundated queen, if productive, will lay eggs producing *drones only*. The eggs of a fecundated queen, on the other hand, *may*—as, indeed, far the greater number of them do—in their progress through the oviduct, become impregnated by the seminal fluid, as they pass the orifice of the sac or gland containing it, which opens into the oviduct. If they be so impregnated, and be then deposited, as they naturally—perhaps *necessarily*—will be, in worker cells remaining such, or into worker cells which are subsequently transformed into royal cells, they are capable of becoming developed into either workers or queens, according to the kind of cell in which they are bred and matured. But, if, in their passage through the oviduct the eggs be not thus impregnated, each will produce a drone—smaller or larger—as it may happen to be deposited in a drone or worker cell. A fecundated queen, vigorous and healthy, will not—probably *cannot*—deposit a drone-producing egg in a worker cell; and it yet remains to be ascertained whether the drones produced from the eggs of an unfecundated, or of a superannuated and enfeebled queen, possess virility, or are in fact true drones.—In the present state of our knowledge of this matter, it seems probable that the size or diameter of the cell determines whether the egg deposited therein by a healthy fecundated queen, shall produce a worker or a drone—a narrow or worker cell causing such a compressing of the abdomen of the queen, when in the act of laying, as results in an emission or effusion of seminal fluid from the sac or gland containing it, into the oviduct, as the egg passes its orifice or mouth; and a wider or drone cell permitting the egg to be deposited without such compression of the abdomen and consequent emission of fluid. It would follow of course, also, that the queen never deposits an egg in a royal cell; but that every such cell is constructed after the egg has been deposited in a worker cell—by removal of material, remodelling it, and totally changing the arrangement and position. However this may be, the fact appears to have been demonstrated that every healthy fecundated queen deposits worker and drone eggs, respectively, in their appropriate cells; and that every unfecundated queen, if fertile, deposits drone eggs alone, in either class of cells indiscriminately. Generally, however, such queens are sterile.

It is to be regretted that Mr. Miner indulges so frequently in sneers at the blindness and imputed ignorance of Huber. Blindness was Huber's misfortune, entitling him to our sympathy; while his valuable contributions to natural science, made under such unfavorable circumstances, challenge our admiration and deserve our praise. That he was ignorant of many things pertaining to his favorite branch of study, which are now well known, is not surprising and reflects no discredit on him:—the same is true of Sir Isaac Newton. Yet, I will venture to say that

Huber was more fully posted up in all things relating to the science and practice of apiculture, as it existed in his day, than Mr. Miner is, in reference to the same topics, as they now exist. Nay, that he was, on some important points, far in advance of his age—which Mr. Miner cannot claim to be, on any.

W.
York, Pa.

[We are much obliged to our correspondent for his remarks upon this subject, and hope he will occasionally favor us with articles upon this or any other subject suitable to the Journal.

As we remarked in our review of Miner's *Mannal*, we have no acquaintance with the subject of bees, having never had them on account of the *kalmia* or “*laurel*” being abundant in our vicinity. The few remarks we made therefore, were general, and founded upon the observations of others, and Schirach was credited on the authority of others. The discrepancy between Miner and Huber was mentioned to call attention to the subject.

Ancient observers are not the only ones likely to be in error—for example, a correspondent in the Boston Cultivator denies the whole theory, or rather fact—of ruminating animals chewing their food after it has been once swallowed. This should lead us to extreme caution in a subject as difficult as that of bees. We have known a person somewhat versed in insects who could not discover the difference between a male and female insect placed before him, although really not difficult to perceive, and many parallel cases will probably be detected in the histories of bees.

It must be remembered that various *species* of bee are cultivated for the honey, in different parts of the world, and consequently, it is unsafe to deny the statement of one observer, until we learn whether the species observed by him is identical with such as furnish different results.

The subject of bees has been treated by so many observers that writers who do not make themselves acquainted with the observations of their predecessors run the risk of announcing old discoveries as new ones. Thus, during the appearance of the 17-years Cicada in 1834, a description of its singing organs was given before a learned society, although this had been done and a figure given in a work published at Ferrara in the year 1600. Who knows therefore what may not be said in the volumes of Aalborg, published at, for example, Copenhagen in 1639 and 1642.

The assertion as to the antennae being organs of smell is as far from being proved as the counter assertion that they are ears—and one German and one English author go as far as to call them *ears*.

Miner's assertion about the eyes being upon the top of the head is about equivalent to saying that the hair of a bear is upon the top of the head, the head of some insects being nearly all eye, although the stigmata occupy but a small space. That the lateral eyes are the *normal* organs of vision in insects, there can be no doubt.—*Ed.*]

Farmers Sons and the Learned Professions.

It has long been a general complaint that while Agriculture is one of the oldest, and certainly most commendable pursuits of life, it has never occupied the prominent position it should have done, but has ever been one of the most neglected and backward of all sciences. This is certainly to be deplored at a time like the present, where so much valuable information upon every department of the subject may be had at so comparatively trifling an expenditure of time and money. This state of things is attributable to several causes, only one of which I shall refer to in my present communication.

Among the sons of our farmers, are found as frequently as amongst any other classes of the community, young men of rare natural endowments. No sooner are their abilities discovered, than an itching to see them lawyers, doctors, or preachers, takes possession of the parents, or some ambitious friend or relative. Thus, in nine cases out of ten, an excellent farmer is spoiled; and the learned professions as they are termed, crowded with hungry applicants for fame and fortune. By this, I do not desire to be understood as speaking disrespectfully of professional men. Far from it. I merely wish to show that parents and young men are often misled by the injudicious kindness and flattering of friends, who assume the task of advising them in regard to their future course in life.

To do away the impression that farming is not a disreputable pursuit should be the object of every parent who really desires the happiness of his children, although it is a humiliating thought that any young man possessed of good common sense should require any such teaching. There is certainly no calling in life more dignified and truly independent than that of the farmer; while it cannot be denied that it is certainly one of the most pleasant and ennobling. If, instead of the silly desire of some parents to make professional men of their sons, they would teach them to love and respect farming as a science, and would endeavor to lead them to imbibe a love for Scientific Agriculture, we should soon find that instead of being regarded by many as a pursuit fit only for the unlearned and rude, it would be elevated to its proper dignity.

It is with pleasure I behold evidences of a disposition to commence the good work. The young men themselves are taking hold of it in good earnest.—Agricultural Societies are springing up in almost every County in Pennsylvania; and foremost in this laudable reform, we find the young men. It is to be hoped that their own self-respect will induce to press forward the work with all their vigor, and to persevere until they have accomplished all that is necessary to place farming where it properly belongs—in the front rank of the Sciences.

J. S. KELLER.

Owigsburg, May, 1851.

Hedging.

MR. EDITOR:—

From the numerous advertisements in our leading horticultural and agricultural journals, it appears there are an abundance of seeds and plants of the Osage Orange (*Maclura aurantiaca*) for sale: and if the demand equals the supply, many of your readers are among the purchasers, looking forward to the end of three years to behold what? Their verdant fields surrounded by an impenetrable living fence? No! But to sad breaches in the continuity of their rows and their consequent failure and mortification. Allow me through your JOURNAL to give my short experience.

Three years since some *good seed* was procured, soaked and planted. It grew finely. The ends of the young plants suffered but little by the frosts of the following winter, and in the spring were transplanted in double rows according to the method detailed in the Horticulturist, vol. 1, p. 353. Their vigorous growth and beautiful appearance during that season was all that the most ardent could desire.—The following spring when heading in (cutting them off six inches from the ground) you may judge of my mortification to find that whole yards of hedge were completely destroyed by mice; the plants cut off several inches below the surface, and the roots eaten.—These breaches were repaired only to be renewed during the past winter. Let it be distinctly understood that these hedge-rows were cultivated on both sides, the grass and weeds kept down. Indeed, in many places where the ground was cultivated in corn and potatoes, kept entirely clean during summer and autumn, it was in winter filled with this species of mouse (*Arvicola xanthogaster*). Some have supposed that plants are destroyed by moles (*Scalops canadensis*) but I have frequently traced their ridges in the immediate proximity of the roots, without a fibre being eaten.

Where those little destructive creatures are no found so plentifully, or kept in check by cats, dogs or hawks, and the hedges are clipped thrice in the proper season, a good barrier may be grown.

In the first number of the Western Horticultural Review, Dr. Warder, who has a splendid hedge of this plant, gives his method of management—the best that I have yet seen.

J. K. ESHLEMAN.

Chester co., Pa.

RICE is being cultivated as an experiment in California, on the San Joaquin. With rice along the river banks, and wheat and barley growing in the back country, California will yet be able to establish herself as a land of agricultural wealth.

THE consumption of beer in Munich for the year 1850 was 39,000,000 of quarts. The city lays a tax of $\frac{1}{2}$ kreuzer on a quart; this tax nearly pays the whole municipal expenses.

Shade as a Fertilizer.

MR. EDITOR:—In conversation with you a few days since, I incidentally mentioned, that I had made the experiment of covering a grass field with straw. I at the time considered such matter as entirely too insignificant to fill up the pages of your valuable Journal. You, however, appeared to think otherwise—said you wanted *facts* and desired that I would give an abstract of the plan for your paper. I will therefore comply with your request.

Having a large quantity of wheat straw for which I had neither use, nor room for storage, I, in last January concluded to draw it on a field that had been laid down to grass, timothy and clover, two years previously. The field contained about ten acres, and we spread over the ground as evenly as we could, some 12 or 15 two-horse loads. It was regarded at the time by many persons, as a novel mode of disposing of the surplus straw, yet generally believed to be advantageous. This spring it could plainly be seen to have the effect of starting the grass *earlier* than in fields adjacent, and causing it to grow with greater vigor. I am fully convinced, that straw spread over the ground at the commencement of winter, would in a great measure prevent the frost from heaving, or lifting the soil, which from the alternate freezing and thawing, frequently occasions the destruction of wheat, clover &c., the frost drawing the plants out of the ground, and leaving them exposed on the surface. A light covering of straw would in a great measure prevent this.

The practical farmer will say, there is nothing new in this, and it is not worth the room it occupies in your Journal—and we partly agree with them.—However, when this simple experiment is taken into consideration in connection with, or rather in confirmation of Mr. Baldwin's theory,—that *shade alone* will fertilize the most barren soils—or considered in the light of *mulching*, it becomes a question of great importance to the farmer and gardener, and in this light may possibly be interesting to some of your readers.

The shading or covering the ground from the influence of our burning sun, and drying winds—with any decomposable substance, such as straw, leaves, coarse litter, tan bark, and other materials, is well known to be of great and manifest advantage to newly planted trees—to beds of Raspberries, Strawberries, Vine borders, and in fact it is believed that all plants grow more vigorously by having a covering over their roots. We might refer to the forest for a confirmation of these facts. The trees grow much more rapidly and larger in those localities, where an annual layer of leaves is left to shade the ground.

By covering the soil with any refuse matter, it remains in a more equable state, both as regards temperature and moisture, the roots of trees and plants find a more congenial medium to extract nourishment from a cool and moist soil, and grow with

far greater vigor—remain in a more healthy and flourishing condition and consequently bear larger and better crops.

If you think the above worthy of a place in the Journal, give it an insertion; if not, consign it to the fire.

Respectfully,

J. B. GARDER.

Floral Retreat, Lan. Co., May 21, 1851.

The Crows and Pigeons defeated—Swede Turnips.

MR. EDITOR—Last year the crows and my neighbor's chickens and pigeons luxuriated on my newly planted corn crops. I was determined to defeat them this season, and have succeeded admirably. I have dipped the whole of my seed corn in *gas tar* and then dried it with plaster. The early corn, and the first planting of late is now up and not a hill has been disturbed.

SWEDE TURNIPS.—We obtained last year a very heavy crop after hay, using about two cords of street manure and 3½ cwt. of guano to the acre, well incorporated together and carefully put into the drills, covered up and instantly sowed the seed. Another observation is worthy of note, that new American seed comes away quicker than the imported and outgrows the attacks of the fly.

R. BUIST.

Rosedale Nurseries & Seed Farm.

The Ashes of Anthracite Coal.

BY JONATHAN B. BUNCE, OF YALE COLLEGE LABORATORY.

Coal, now so common an article of fuel in all our cities, leaves but a small quantity of ashes, yet when we take into account the number of tons consumed in a single year this amount becomes very considerable; hence, it becomes a matter of interest to know whether it can be considered of economical value.—With this purpose in view, two samples of coal were selected, the white and red ash varieties, and the quantities soluble both in water and acid determined with the following results, viz:

White ash in water	3.74	Red ash in water	3.35
White ash in acid	17.07	Red ash in acid	18.65

The following analysis is the mean of two determinations of the portion soluble in acid.

W. a. var.	R. a. va.	W. a. var.	R. a. va.		
Soluble silica	796	8.621	Soda	1.933	1.146
Alumina	35,201	29,575	Potash	1.433	.732
Iron	29,643	40,614	Phos. acid	1.790	1.880
Lime	18,655	1,108	Sul. acid	8.164	3.010
Magnesia	1,730	13,992	Chlorine	.087	.018
Total,					
99,448					

The results obtained in these two analyses seem to justify the extensive use of coal ashes for agricultural purposes; they are very valuable on account of the sulphates of lime and magnesia which they contain, and also from the phosphoric acid and alkalies.—Hundreds of tons which are now wasted might thus be brought into use.—*Proceed. Am. Assoc. 1851.*

CHOLERA IN ANIMALS.—Evidence was produced to the French Academy, showing that during the prevalence of the cholera in France, horses were observed to be affected with the disease in a like manner with men.

We have, on several occasions, been asked for the best work on the cultivation of tobacco. We know of no American book on the subject, and therefore present our inquiring friends with the following essay written by Peter Miner, of Virginia. We copy the article from the Plough, Loom and Anvil, where it received a hearty recommendation from Mr. Skinner. As tobacco growing is attracting much attention in parts of Pennsylvania, and especially in Lancaster county, the essay will be of importance to new beginners in the business. We shall complete it in our subsequent numbers.

**Notes on the cultivation & management of Tobacco,
From the plant bed to the prize—according to the most
approved practices in Albemarle and the adjacent
counties in Virginia.**

**1ST. OF THE CHOICE OF LANDS FOR THE PLANT-BEDS, AND
MODE OF PREPARING IT.**

A rich virgin loam with a slight mixture of sand is ascertained to be the best soil for raising tobacco plants. Such spots are indicated by the growth of alder and hazle bushes in bottoms and on the margin of small streams, and if the situation has the command of water for irrigation it is on that account to be preferred—the spot being selected, the first operation is to burn it with a strong fire. For this purpose the growth of every kind is cut off, (not grubbed up) and the whole surface raked very clean. The burning should be done before Christmas, or as soon after as the weather will permit—and if done thus early it cannot be well too heavy, even bringing the soil to a hard cake. The wonderful fertility imparted to soil by fire, has of late years been clearly proved and developed by various experiments in this and other countries, but judging from long established practice, we suppose it is a fact that has been long known to tobacco planters; that this fertility is imparted by fire, and no ways dependent upon the ashes left by the process is clearly proved from the fact, that the same results will ensue if the ashes are swept off entirely clean. Or take another piece of ground of equal quality, cover it with as much or more ashes, and prepare it in every respect similar except burning, and plants cannot be raised in it. Hence the necessity and propriety of regular and uniform burning, the want of which is always manifested by a diminutive, yellow and sickly growth of plants in those spots not sufficiently acted on by the fire.

After the ground becomes cool from burning, the whole surface should be swept with a coarse twig broom to take out the coals. In this operation some of the ashes will be removed, but that is of no consequence; it should then be broken up about two inches deep with grubbing hoes, in which operation and in repeated choppings afterwards with hillling hoes, all roots will be cut and finally got out with a fine iron tooth rake which will leave ground in proper order to receive the seed.

The most approved time for sowing is about the first of February, the beds previously prepared being suffered to lie and mellow by the frost and snows to that time. But it will do very well to burn and sow after that time, as late as the first of March, taking care not to have the heat so great. The quantity of seed is as much as can be taken up in a common ta-

ble spoon* for 100 square yards, and that in proportion. This quantity of seed should be mixed with about one gallon of clean ashes, and half that quantity of plaster of Paris, and the whole well incorporated, and then strewed uniformly over the bed at two operations, crossing at right angles to ensure regularity. Cabbage seed for early planting, tomato, celery, and lettuce seed may be sowed in small quantities with the tobacco seed, without material injury to the growth of the plants. After sowing the seed the ground is immediately trodden over closely with the feet, and covered thick with naked brush. If the frost is severe from this time it is common to take off the brush sometime in the month of March, before the plants appear, and tread the bed again, and at the same time give the ground a slight dressing of manure. The dung of fowls of all sorts, is sought after for this purpose, which being beaten, is sifted over the bed through a coarse basket or riddle. The brush is then restored, and not finally removed until the leaves of the plants are half an inch in diameter; when the dressing of manure is again applied, taking care to wait the approach of rain for that purpose.—Any grass or weeds that may have sprung up in the meantime are carefully picked out. In dry seasons, if the situation admits of it, the bed must be irrigated, by training a small stream of water around the edge of it. If not it should be watered every evening with a common watering pot, or pine bushes dipped in water and shook over the bed until sufficient moisture is obtained.

Under a careful observance of this management, the plants according as the seasons have been favorable or not, will be fit to transplant from the 15th of May to the 10th of June. A planter thinks himself lucky, if he can get his crop pitched by the 10th of June. After that, the seasons are uncertain from the heat of the weather, and the chances of success for a crop precarious; though it has been known to succeed when planted in the middle of July.

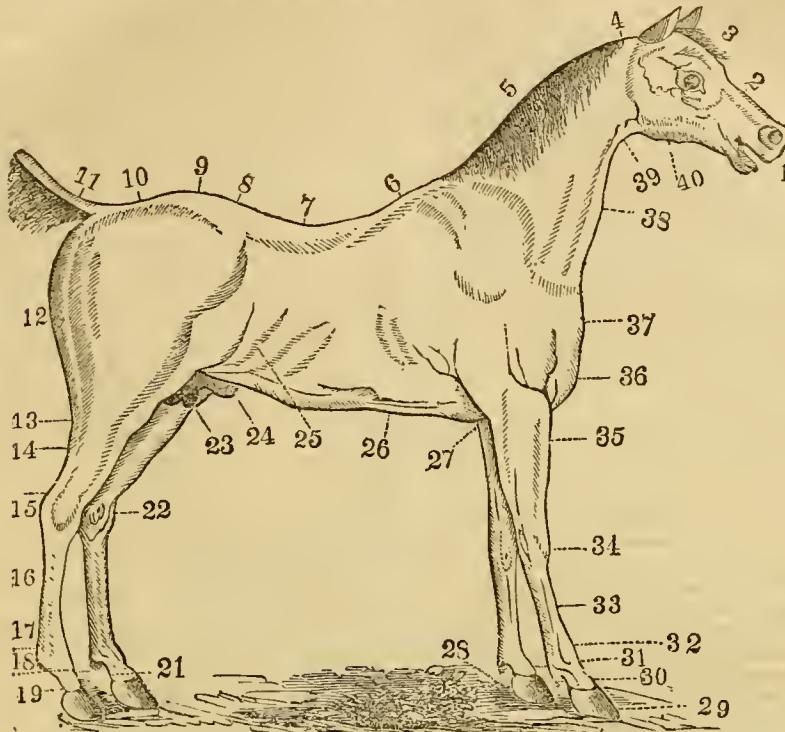
* This quantity of plant bed is generally considered under good circumstances as sufficient to set ten thousand hills in good time. But the prudent planter taking into consideration the casualties of fly, drought, &c., will do well to make a larger allowance. We know of no certain remedy or antidote against the fly which destroys the early plants.

THE DIRECTORS of the public schools of the several wards have been improving and ornamenting the grounds of the Reading Academy, in Fourth street, by planting shrubbery, roses, &c., and adding trees here and there where they are needed. Buildings of this character should be rendered as attractive as possible. It indicates taste and refinement on the part of those having them in charge, and reflects credit on the whole community in which they are located.—*Reading Journal.*

A PROLIFIC PEOPLE.—The census marshal of New Mexico cites, as an evidence that the people of that region are prolific, that Ojo Caliente Jose Antonio Prugillo has twenty-five children living—thirteen sons and twelve daughters—by one wife. Jose and his wife were living, in good health, at the venerable ages, respectively, of 90 and 86.

THE proposition of Mr. Russell to establish an Agricultural School, has met with general favor.—*Philadelphia Inquirer*, 22d May.

THE HORSE:
(Prize Essay, which obtained, in England, the reward of Five Pounds.)



TERMS COMMONLY MADE USE OF TO DENOTE THE EXTERNAL PARTS OF THE HORSE.

1. Muzzle.	11. Dock.	21. Coronet.	31. Large Pastern.
2. Race.	12. Quarter.	22. Ham, or Hock.	32. Fetlock.
3. Forehead.	13. Thigh, or Gaskin.	23. Stifles.	33. Cannon.
4. Poll.	14. Ham-string.	24. Sheath.	34. Knee.
5. Crest.	15. Point of the Hock.	25. Flank.	35. Arm.
6. Withers.	16. Cannon.	26. Girth.	36. Breast, or Bosom.
7. Back.	17. Fetlock.	27. Elbow.	37. Point of the Shoulder.
8. Loins.	18. Large Pastern.	28. Heel.	38. Windpipe.
9. Hip.	19. Small Pastern.	29. Hoof.	39. Gullet.
10. Croup.	20. Hoof.	30. Small Pastern.	40. Jowl.

AN ESSAY ON THE EXTERNAL FORMATION OR STRUCTURE OF THE HORSE, AND ON THE DISORDERS ORIGINATING THEREIN.

Plerique omnes faciunt adoles-centuli
Utanium ad aliquod studium adjungant, aut ad equos
Alere, aut canes ad venandum, aut ad philosophos.

TERENCE.

I purpose, in the following pages, first, to give a succinct, but, I trust, useful and explicit description of the exterior conformation—the make and shape of that valuable animal the horse; discriminating the originally well formed tit from the cross-shaped, and likely-to-become-diseased brute, and the nag that can go with safety and pleasantly on the road, or carry sixteen stone across a heavy country, from the imbecile and weakly-constituted spider; and lastly, to show by what ready and certain modes we may detect unsoundness in the purchase of a prad, and when we are to pronounce that he is perfectly sound.

The horse, in the estimation of a sportsman, stands preëminent above other quadrupeds, as man does above every other animal: not only do matchless beauty and strength of form, combined with unrival-

ed speed, distinguish him, but the extensive utility he is of to us, and the share he takes in our diversions and perilous enterprises, serve to inspire us with even a degree of affection for him. Every horse is adapted to some particular purpose; for horses not only differ in kind, but like men, in utility, in temper, in stamina, &c., and the selection of them, in regard to these particulars, constitutes one of the most arduous and nicest duties of the *connoisseur*; he must readily acknowledge good or bad conformation—trace genealogy in the outline, and discover a *je ne sais quoi* in the *tout ensemble* that denotes a good or bad instinctive and unalterable qualities.

In describing the good and bad qualities of a horse, it will be necessary to make use of many terms, denoting different external parts, which, to all horse-

men will not require any explanation; lest, however, the reader be unacquainted with some of those terms, a plate is annexed, having references to the parts themselves in the figure of a horse. It requires some experience, but more attentive observation, to be what, in modern *horse-phraseology*, is called a *good judge*; i. e. (if we are asked to define a good judge,) to know, *at once*, by a *cast of the eye*, whether the nag, as soon as he is *pulled out*, is *likely to suit*; is he *cut out for a hackney*, or is he *calculated for harness*? Does he *look like a hunter*, or has he any *good looks* about him? Does he *show any blood*, or is he *all over a mongrel*? In fine, is he the *sort of thing* you want, or won't he do until he meets with a *greenhorn*? These, and various other important considerations we hope to unravel the nature of in the course of this inquiry, offering such remarks, from time to time, as may prove of practical service to the young and inexperienced horseman. At first sight of a horse, a judge takes a general survey of him, and if he observe any apparent disproportion or deformity, his attention is at once fixed to that particular point. Every horse, for example, that is tolerably well formed, should exhibit due proportions of limb and carcass; in fact, nine out of ten have as much carcass as is equal to the area of the space occupied by the legs in ordinary standing; but should his legs be extraordinarily long, or his carcass disproportionately small, he is said to have too much daylight under him, and that is certainly no mean objection. Should his head be very large, his neck of disproportionate length, his fore legs stand under him, or his quarters be ragged and ugly, such glaring imperfections cannot fail to attract our notice as soon as, or even before the groom has set him on his legs. But we shall have occasion to particularize these things in a detail of the perfections and imperfections of the different parts entering into the composition of the animal.

The exterior of the horse may be divided, for the convenience of thus describing his several parts, into head, neck, body and legs. First, we shall delineate a good head. The *nob* should be small. A large head is not only a plain head, but a bad point, inasmuch as it really, under certain circumstances, detracts from the powers of the horse; he has, in fact, more to carry—it is a burden to him, and the only way in which he can possibly carry it to advantage, is at the extremity of a short and upright neck.—Like the weight of a pair of steelyards, if it is supported by a long and horizontal neck, its burden becomes enormously augmented, so that the weight transmitted to the fore extremities (for those parts support the head and neck as well as half the carcass) is much increased, and, from the natural preponderance of it before, is very likely to prove the cause of the horse's falling down, more especially if the rider is heavy, every trip or mis-step he may chance to make. In addition to all this, a lawyer (or big-headed horse) is apt to have a hard mouth, or rather, we say, no mouth, so that we are always apprehensive of his being heavy in hand, and unpleasant to ride. It is proper, however, to state, before we proceed farther, lest we incur censure for these remarks, that the formation of the neck, and the mode in which the head is set on, and how he carries it, will have much to do with the head being objectionable from its size, and with his being light or heavy in hand; for we have known many big-headed horses ride well, and be as safe as any others. Next to size, its shape becomes a consideration. Every feature should give animation to the countenance; let the forehead be broad and flat; the eye staring and full of fire; the ears thin, fine, and often erect; the

nostrils circular, dilated, and reddened within; the lips soft, thin, and hairless; the jowls extended and the cheeks well marked.

"Fire from his eyes, clouds from his nostrils, flow."

This, at least, is what we would have it in the thorough-bred, and as a general rule, the nearer that of any other description of horse approaches to it, the better the family he springs from, and the more sanguine we may be in our prognostic of his abilities.—That such a horse looks like a sticker, or is a perfect gentleman about his nob, are no uncommon nor very unmeaning expressions in the mouths of sportsmen and eapers. But his head may be very long, or it may be very short, though we do not know that either is particularly objectionable, except as an eye-sore, if the countenance is something like what we have just described; unless he be a Yorkshireman, and then, certainly, we should not fall in love with such a big canister. The race ought to be perfectly straight, (see plate,) and the muzzle, in the blood horse, square, and such as will go into a pint pot; a Roman nose (one in which the race is curved) is by no means desirable, though his napper be but of ordinary dimensions; it is seen more commonly, however, in a big head, which it, in a side view, makes appear not only much larger, but exceedingly ugly; this may be said to constitute a plain Yorkshire head. Withal, the head, to render it handsome, should be well set on; its junction with the neck should form a sort of curve, so as to leave ample space in the throat for a large and prominent gullet, by which we may judge him to be a good-winded horse.

The neck now demands our attention; if good, the crest will form an arch of agreeable curve from the poll to the withers,

"With neck like a rainbow, erecting his crest."

It will be of proportionate length, and progressive increase in breadth, as it approaches the chest. A long neck, if it be straight, or but little curved, is objectionable for the reasons we stated when speaking of a large head; a short one, however excellent it may be on the principle of the steelyards, is never handsome and seldom exists without rendering even a good hackney piggish. That short-necked horses are better winded than others, because the air has less distance to and from the lungs, is an opinion to which we cannot subscribe. The neck should also be thin, not thick and heavy, and rounded and straight along its lower margin; should the canal of the jugular vein be deep, and the windpipe full and prominent below it, we may regard it as a sign of good wind. When the arch of it is reversed, i. e. below instead of above, and the crest, or what ought to be the crest, near the withers, is hollow and sunken, the horse is said to have an *ewe-neck*, one of the greatest natural deformities common to these parts. Under these circumstances it is usual for a dealer to say that the neck is put on the wrong side upward; but, in reality it appears to arise from the junction of it with the chest being too low down.

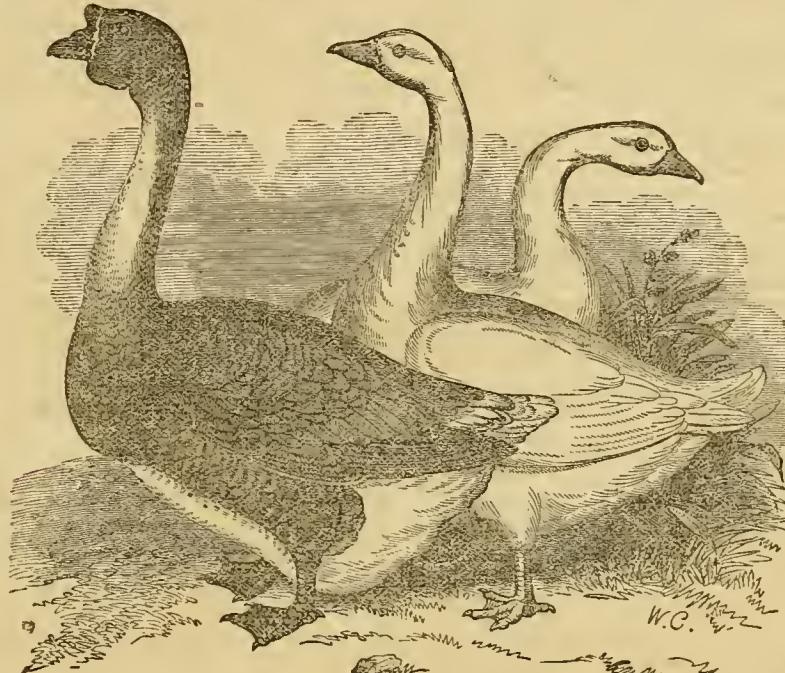
[The above valuable essay on the horse we copy from the *Plough, Loom and Anvil*, to the publishers of which journal we are indebted for the engraving which accompanies it. The length of the article precludes the possibility of publishing it entire in a single number. We shall therefore give the remainder in our subsequent numbers.—*Ed.*]

Improved Fowls.

THE CHINA GOOSE.—Of this variety, three beautiful specimens were exhibited at the late Agricultural Show held in the county of Philadelphia. They were owned by a gentleman, whose name I forget, living in the vicinity of Tacony, near this city. In introducing this variety to the reader, Mr. Dixon says:—

There is something in the aspect of this creature, the dark brown stripe down its neck, its small bright eye, its harsh voice, its ceremonious strut, and its affection of seldom being in a hurry, which seems to say that it came from China. It would perfectly harmonize in a picture of Chinese still life; or in a Chinese garden, with artificially arranged rocks, dwarf trees, crooked trellises, and zigzag pathways; or, in a more extended landscape, it would group well on a broad river, beside a boat filled with shaven fishermen, with their trained cormorants and pig-tailed

children. If it does come from China, it has no doubt been domesticated for many hundred years, perhaps as long as the peacock or common fowl. They may be made to lay a large number of eggs by an increased supply of nourishing food. This is very different from the disposition to "lay everlasting," as seen in the Guinea fowl, and some varieties of the domestic hen—the Black Spanish for instance; because the China goose does in the end feel a strong desire to incubate as soon as her protracted laying is done, whereas entire exemption from the hatching fever is the great merit of the "everlasting layers." If liberally furnished with oats, boiled rice, &c., the China goose will in the spring lay from twenty to thirty eggs before she begins to sit, and again in the autumn, after her moult, from ten to fifteen more. I have never observed any disposition to sit after the autumnal laying. It is not, as in the Guinea fowl, a spontaneous flow of eggs, for which the ordinary



THE HONG GONG, OR
CHINA GOOSE.

COL. JACQUES' BREMEN
GEESE.

diet of the creature is sufficient, but is as much dependent on feeding as the fatness to which a bullock is brought. A goose that I supplied with as much oats as she could eat, besides grass, potatoes, and cabbages, laid eggs larger than ordinary; one of them (with a double yolk) weighed seven and a half ounces, nearly half a pound. I need hardly say that double-yolked eggs are very rare, except among birds that are highly fed.

The prevailing color of the plumage of the China goose is a brown, which has been aptly compared to the color of wheat. The different shades are harmoniously blended, and are well relieved by the black tuberculated bill, and the pure white of the abdomen. Their movements on the water are graceful and swan-like. It is delightful to see them, on a fine day in spring, lashing the water, diving, rolling over through mere fun, and playing all sorts of antics. Slight variations occur in the color of the feet and legs, some

having them of a dull orange, others black: a delicate fringe of minute white feathers is occasionally seen at the base of the bill. These peculiarities are hereditarily transmitted. But the white China goose, if it be not specifically distinct, is a variety so decidedly marked as to demand a separate notice.

The eggs of the China goose are somewhat less than those of the domestic kind, of a short oval, with a smooth thick shell, white, but slightly tinged with yellow at the smaller end. The goslings, when first hatched, are usually very strong. They are of a dirty green, like the color produced by the mixing of Indian ink and yellow ochre, with darker patches here and there. The legs and feet are lead-color, but afterwards change to a dull red. If there is any thing like good pasture for them, they require no further attention than what their parents will afford them.—After a time a little grain will strengthen and forward them. If well fed, they come to maturity very

rapidly. In between three and four months from the time of leaving the shell, they will be full-grown and ready for the spit. They do not bear to be shut up to fatten so well as common geese, and therefore those destined for the table are the better for profuse hand-feeding. Their flesh is well-flavored, short, and tender: their eggs are good for cooking purposes.

THE BREMEN GOOSE.—As quality of flesh, combined with weight, is a main consideration, I wish to mention, regarding the former, that the flesh of the Bremen goose is very different from that of any of our best domestic varieties. It does not partake of that dry character which belongs to other and more common kinds, but is as tender and juicy as the flesh of a wild fowl; besides it shrinks less in the process of cooking, than that of any other fowl. Some of the keenest epicures have declared that the flesh of the Bremen goose is equal, if not superior, to that of the celebrated canvas-back duck. There is assuredly some comfort, not uncombined with ease, in carving a bird that weighs seventeen pounds, and taking a slice from the breast, so long as to be obliged to cut it in two, that one-half may cover no more than the width of a common dinner plate.

The Bremen goose inclines to commence laying at an earlier period than this northern latitude favors, which is in the latter part of February. To give the young fair play, it is not advisable that hatching should be finished before the first of June. The mode of prevention used by my father is as follows:

The whole of the breeding stock, male and female, are put into a dark room—say about the twentieth of February—and kept there until about the tenth day of April. When in durance they are well fed once a day with corn, and allowed sufficient water all along to drink. Once a week they are allowed to get out for one hour, to wash and plume themselves, and are then shut up again. While thus confined, they lose the inclination to breed, and do not assume it while they are kept shut up; but in eight or ten days after they are set at liberty, the disposition returns, and they commence laying.

When first hatched, the goslings are of a very delicate and tender constitution. My father's general practice, is to let them remain in the box in which they were hatched for twenty-four hours after they leave the shell; but he regulates this by the weather, which, if fair and warm, may tolerate the letting the goslings out an hour or two in the middle of the day, when they may wet their little bills and nibble at the grass. They ought not to be out in rain at any time during the first month. A very shallow pool, dug in the yard, with a bucket or two of water thrown into it, to suit the temporary purpose of bathing, is sufficient during the period named.

The practice of feeding my father follows is, not to give the goslings any grain whatever, after they are four days old, until snow falls, when they require to be fed on corn for a time. He thinks, however, that if well fed on grain from the time they were hatched, they might weigh from 4 lbs. to 7 lbs. more than by leaving them to grass-feeding alone.

By feeding his geese until they are four days old, and then literally "sending them to grass," the weight of my father's geese, at seven to eight months old, has averaged from 17 to 18 lbs. each, after the feathers had been cleanly picked off. He has no doubt that 25 lbs. could be easily attained by a little attention to feeding with grain.

The breeding-boxes mentioned above are made in the fashion something like a dog-kennel, with a roof

pitched both ways. They are 30 inches long, by 24 inches, and are 24 inches in height. The door is in the end, and is covered by a sliding panel, which moves upwards, when egress or ingress is sought, and may be shut down at pleasure. For the first month, the geese and goslings are all shut up in the boxes at night, in order to protect them against rain and vermin.—*Dixon and Kerr's Ornamental Poultry.*

Domestic Economy.

ADVANTAGES OF SYSTEMATIC ARRANGEMENT.—It is well known that in domestic economy, good housekeepers do actually derive this incidental advantage from a day of rest through the week:—One day is devoted to washing; one to ironing; one to cleaning house; one to mending; one to baking; so that by Saturday night everything is brought to a comely state. None of these things are left for the approaching week. Everything is arranged and in order, as if she did not expect to live another week. Men should do the same on their farms. If they did they would thrive and prosper.—*Blake's Farmer's Every Day Book.*

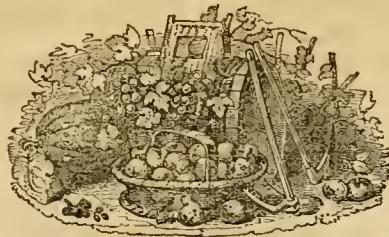
TO MAKE GREEN SALVE.—Take freshly-gathered white lily flowers, broad-leaved, common plantain, chickweed, each, as much as can be grasped in a man's hand; one pound of newly-churned butter without salt; one pound of mutton suet, melted and strained; one pound of bees-wax; and one pound of rosin. Melt the suet and butter together, and boil in them the herbs, until the juice is all extracted; then strain through a cloth, and add the rosin and wax.—When melted and well mixed, strain again into a queensware or earthen pan, and stir till cold, to prevent separation. An excellent cooling and healing salve for wounds and burns.

TO KILL COCKROACHES.—Mix equal quantities of red lead and Indian meal with molasses, making it about the consisteney of paste. It is known to be a certain exterminator of roaches. A friend who was troubled with thousands upon thousands of them, rid his house of them by this mixture in a very few nights. Put it upon plates and set it where the vermin are thickest, and they will soon help themselves. Be careful not to have any articles of food near by where you set the mixture.

BED-BUGS.—There is a long article in the *Valley Farmer*, by which it is established beyond question that sweet oil occasionally rubbed over bedsteads, chair boards, &c., will effectually prevent the appearance of bed-bugs. We think it unnecessary to publish the evidence of the efficiency of this cheap and agreeable preventive of the nuisance in question.—The reader will take our word that it is conclusive.

TO CLEAN RUSTED IRON WORK.—Cover over the work with oil and let it stand for five or six hours.—Then wash it off with strong soap-suds and a good brush. The brush must be long in the bristles. Iron work should never be left wet any length of time.

CURE FOR CORNS.—Pare off the hard part of the corn with a sharp knife, not so as to cause it to bleed; apply the inner part of an onion, mashed fine; keep it on during the night, and a very few applications will effect a cure.



Horticultural Department.

POMOLOGICAL REMARKS.

BY DR. W. D. BRINCKLE.

The Raspberry.

Our indigenous Raspberries, it is generally conceded, are inferior in quality to those of European origin. Over the latter, however, they possess one advantage—that of hardiness. The foreign kinds, not being able to withstand the sudden vicissitudes of our variable climate, are generally killed nearly or quite to the ground, unless recourse is had to artificial means of protection. All attempts to acclimate them, however perseveringly continued, have failed. It is therefore desirable that some other effort should be made to obtain varieties, equaling them in size and flavor, and possessing a more hardy constitution.

It is a well known fact that all plants usually succeed best in their native land. To accomplish then the improvement of the Raspberry, and indeed all other kinds of fruit, we should raise seedling varieties. In doing this, two modes present themselves for our consideration. In the one case, seed, artificially fertilized, is used;—in the other, that which has been fertilized naturally, or without the intervention of man.

The first, commonly termed “cross impregnations” is the most certain way of forming valuable varieties and is conducted on precisely the same principle as that pursued by our agriculturists in improving their breed of cattle. A fine specimen of each sex, possessing certain good qualities not common to both, is usually selected, and a combination of their good qualities may be expected in the offspring.

The manner of performing the operation of cross impregnation will not be described at present; but on a future occasion it will probably be made the subject of some remarks.

The other mode of producing new and valuable varieties of raspberries suited to the peculiarities and necessities of our climate, namely: by planting seed which has not been subjected to artificial fertilization, also promises favorable results. The seed selected should be of the finest sorts, such as the True Red Antwerp, Yellow Antwerp, Franconia, Fastolf, and Kneatt's Giant, which are all of foreign origin, and emanate from a species that has been under cultivation, in Europe, for many centuries. Seedlings from these varieties, like the progeny of many animals and

vegetables which, for a series of generations, have been placed under the meliorating influences of artificial culture, will be found to vary, in several respects, from the parent. It is important that no protection should be given to the plants raised from seed; they should be subjected to severe exposure, in order that all the tender ones may be killed off. We require hardy varieties.

The seed of the raspberry, even when planted immediately after the fruit is ripe, will scarcely ever vegetate till the following spring; differing in this respect from the strawberry seed, which generally germinate the same season they are planted, and frequently fruit the following season. It is perhaps not generally known, that raspberry plants, raised from seed sown in the spring, will occasionally bear fruit in the summer of the following year. This will more certainly be the case, if the seed be planted in a pot or box and placed in a warm room with a southern exposure, in February or March.

Seedlings raised from foreign varieties will often be found to sport considerably in foliage, and in the form and color of the berry. From the seed of the Fastolf, a crimson variety, I have raised plants, some of which bear light cream-colored, some straw-colored and some crimson fruit. From a seed of Dyaek's seedling, another crimson variety, originated the orange raspberry, the fruit of which is neither red nor yellow, but of a bright orange color. From seed of the Col. Wilder, a cream-colored variety, and a seedling of the Fastolf, I have raised a number of plants, the fruit of some of which is red, and of others yellow of different shades. Having artificially fertilized a blossom of the Fastolf with pollen from the Yellow Antwerp, all of the seed contained in the berry formed by this operation were planted. Many of them vegetated; but so tender were most of the plants, that all save one perished. The survivor, (named the French as a compliment to my highly valued friend the Hon. B. V. French, of Massachusetts,) bears a crimson fruit and seems to possess more constitutional hardiness than either of its parents. One object in making the preceding cross between a red and a yellow fruited variety was to ascertain whether the fruit of the offspring would preserve the separate color of one or the other parent, or consist of a blending of the two.

Philadelphia, May 26, 1851.

COMPARATIVE COST OF SWORDS AND PLOUGHSHARES.—

It is estimated that the agricultural labor done in England, in 1847, cost £18,200,000, and official returns show that the cost of her naval and military establishments for the same year was £18,500,000, that is £300,000 more than for all her golden harvests.

The prospect of a bountiful harvest was never more flattering than now. From every section of the State we have the most cheering accounts.

Transplanting Pear Trees.

MR. EDITOR:—As you have expressed a desire that farmers should communicate facts for your Journal, I herewith offer one, which though familiar to some of your readers, may be new and valuable to others.

I have frequently heard persons complain of their repeated failures in transplanting fruit and other trees, but especially the pear tree. Having at various times had occasion to transplant several fine young pear trees, and knowing how repeatedly others had met with ill luck, I was induced before attempting the first one, to take counsel from a friend (whose success was almost certain,) as to the plan to be pursued. His advice was, first, to prepare the hole destined to receive the tree, of a size not less than from three to four feet in diameter, and from eighteen inches to two feet in depth; the depth and diameter depending upon the size of the tree. The earth in the bottom of the hole was well loosened to the depth of four or five inches; while that taken from it was thoroughly pulverized, and when occasion required it, enriched with manure.

The next thing to be done was to take up the tree, about which too much care could not be exercised.—The delicate fibres of the roots through which the tree receives its food, were carefully protected from injuries; and no pains spared to preserve them as entire as possible. To accomplish this more effectually, the digging was commenced at a sufficient distance from the body of the tree to enable the transplanting to ascertain how far the roots had extended themselves, so that having ascertained this, he could work to better advantage. After having loosened the roots, and before removing the tree, a mark was made upon the bark, in order that it might be placed in its new home, *in precisely the same position in relation to the points of the compass, it formerly had.* A sufficient quantity of the enriched and well pulverized earth was next filled into the hole to cause the tree to stand at exactly the same depth as before.—The roots were then nicely adjusted, so that every fibre was brought in contact with the soil, in order to effect which the hand was used, instead of the spade. Some of our most distinguished horticulturists recommend the plunging of the roots into a puddle of thin clay or mud, but my experience as well as judgment, advise a different course. One of the essential requisites to success in transplanting is, that the delicate fibres of the roots be so arranged as to take up nourishment from as large an amount of soil as possible. This can be done only, by *separating* them. Plunging them into a puddle of clay or mud has the effect of causing them to *cling closely together*, and thus defeats the very object it is intended to promote. If a bucket of water is poured in after the roots are covered with soil, the same end to be accomplished by puddling will be secured, with this difference in favor of the former plan, that the fibres

of the roots will be *separated* instead of *adhering* to each other in masses.

After filling the hole, the soil should not be pressed in too tightly, but a few days given it to settle, and if occasion requires it, more soil may be added from time to time so as to keep the surface even with the ground around it.

By pursuing this simple plan, and *taking special care to have the trees placed in their new position with particular reference to the marks on the bark*, I have been uniformly successful in transplanting. Several of my friends have tried it with the same success; and I am firmly impressed with the belief that if this system were generally adopted, there would be fewer failures in this important department of Horticulture.

I will merely add that I have always selected the middle of April as the time for transplanting, though Autumn would perhaps prove equally propitious. I have also been careful in selecting, when practicable, a dry situation, with a good loam soil, finding it best adapted to the pear tree.

AGRICOLA.

New Holland, Pa., May 24, 1851.

Destruction of Birds & Increase of Noxious Insects.

MR. EDITOR:—It is a well known fact that thirty years ago, our apples were, as a general thing, more sound and perfect than now—our peach trees suffered less from destructive insects—the ravages of the curculio were scarcely worth mentioning, while many of the injuries now inflicted upon our fruit and forest trees were almost unknown to the farmer. It is an equally well established fact that thirty years ago, thousands of insectivorous birds were to be found on our farms, where scarcely a single one is now to be seen. Every tree and bush was alive with their presence and the whole country made vocal with their delightful warblings. Now, compare these two facts, and what is the legitimate inference to be drawn from them. Why, that the increase of noxious insects has been in an exact ratio with the decrease of the birds. Is not this subject worthy the attention of the farmers, and should they not combine their efforts for the purpose of preventing the destruction of these useful and harmless little birds, by lazy gunners?

In a former number of the Farm Journal, I observed an article in which the use of chickens was highly commended as preventive of the increase of the curculio. Believing the suggestion an excellent one, I have arranged my yard so as to enable me to keep a number of chickens in the vicinity of my plum trees. If chickens are the enemies of the curculio, and can be made useful in preventing their increase, why should the farmers permit the little birds to be destroyed, when it is well known that they are the most effectual means of preserving his fruits and

trees from the hosts of noxious insects which now infest them, and the yearly increase of which is truly formidable and alarming.

If I remember rightly, by an Act of General Assembly, the destruction of insectivorous birds in Lancaster County, at any time between the first of April and the first of October, is made a penal offence. Why is not this law enforced against the lazy men and boys who may be seen daily in pursuit of the birds? I never meet one of these straggling louts without feeling strongly inclined to give him a good drubbing. What a triumph it must be to them to kill a harmless little wood-robin or field-lark! No man possessed of a single spark of humanity would be guilty of doing it, while no one can plead necessity as an excuse for his barbarous conduct. One half the time and effort, (to say nothing of the expense of powder, shot, and wear and tear of clothing,) if expended in almost any honest work would pay far better. If, therefore, it cannot be a matter of profit, it must be one of sport, and the man's mind must be an empty one, and his heart a cold one, who can find either amusement or sport in such an unmanly pursuit.

I appeal to the farmers and friends of the little birds in our own county as well as in every section of the State, to assist in preventing this exterminating warfare against harmless and useful birds.

AN OLD FARMER.

Lancaster Co., May 26, 1851.

Kitchen Garden.

MR. EDITOR:—Though gardening was the first profession of which history gives an account, yet it appears strange to us at the present day to see it so feebly practised. At this period of the season, the gardener must have a head and an eye to his second crops, or in other words, to plan out his succession, so as to keep the ground covered and properly cultivated. A succession of bush or snap-short beans is indispensable; plant a few every ten days till August. Turnip rooted and long blood beet will produce a good crop sown as late as the 4th of July; soak the seed in water a few hours before sowing, and if the weather is dry, water the drills. Never sow turnips on ground from which a crop of cabbage has been just taken or even one year previous. Plant out celery for early use—manure and moisture is indispensable to its growth. The soil should be dry or ploughed deep and well pulverized. Soap suds once a week is very conducive to its luxuriance.

R. BUIST.

Rosedale Nurseries and Seed Farm.

TO DESTROY THE CATERPILLAR.—In answer to many inquiries for the best mode of destroying caterpillars on trees, which have caused such havoc of our hopes the present year, I would say that three drops of lamp oil poured into their nest will effectually destroy them.—*Albany Cultivator.*

Horticultural Societies.

Proceedings of the Pennsylvania Horticultural Society.

The stated meeting was held in the Chinese Saloon, Philadelphia, May 20th, 1851. The President in the Chair. The May meetings of the Society are usually among the most attractive occurring at a season so far advanced as to preclude all danger by sudden atmospheric changes to green house plants. Proprietors therefore permit their choicest specimens to be sent for the gratification of members and visitors, who throng the Hall and enjoy the scene with unmixed delight. On this occasion many embraced the opportunity who assuredly must have been pleased, having spread before them extensive tables covered with a great variety of beautiful flowering plants, and culinary vegetables in profusion. Of the former, Peter Mackenzie exhibited a handsome collection of Calceolarias, Fuchsias, Cinerarias, and a large specimen of Azalea variegata, completely enveloped with its splendid flowers, an object of much attraction. Robert Buist, a collection of Pelargonias, many of which were the new fancy varieties and shown for the first time, and all were of the choicest kinds, fine Azaleas, new Calceolarias, and a number of plants of recent introduction and now for the first time brought into notice—Tetrapheca verticillata, a pretty delicate upright plant with very narrow leaves in whorls and cerulean flowers—Centranthus microsiphon, another of delicate habit bearing numerous slender flowers in umble form of a pink hue—Henfreya Scandens, a climbing plant bearing clusters of white flowers—a seedling Minutus of marked colors and beauty, named "Jupiter," and Azalea coronata. We would remark here that both of the above collections were not offered in competition, but in a liberal manner furnished for the gratification of visitors. John Lambert's gardener, a collection containing fine Pelargonias, Cinerarie, two specimens of Rhododendron ponticum in full bloom, etc. Benjamin Gulliss and William Hall each choice Roses. A very large and beautiful basket of cut flowers was shown by the President's gardener.

Of Fruits—there were ripened Grapes of the white Constantia and Chasselas of Fontenbleau, varieties from the President's houses—Strawberries of open culture from J. M. Tage, Burlington, N. J. The Loquat grown and exhibited by Mrs. Jno. R. Latimer of Wilmington. Two Seedling Apples of merit by Wm. Haines, Pricetown, Berks Co.

Vegetables—John Riley, gardener at the Asylum for the Insane, exhibited Cauliflowers which for great size and luxuriance far surpassed any former occasion. Cucumbers of large size were shown from the houses of Geo. W. Carpenter, Germantown; Samuel C. Ford, Cedargrove; Isaac Newton, Delaware Co., and Harry Ingersoll. Rhubarb of gigantic proportion, some stalks of which measured from three to four feet in length, and it was thought that half a dozen stalks would weigh full twenty pounds, by Samuel Cooper, Henry Cooper, John Riley, William Hobson and William Hall. Asparagus of great weight by James M. Tage, Burlington. Forced Potatoes of the ash leaved kidney variety, by C. Cope's gardener, and very full displays by Anthony Felton, jr.; by Miss Gratz's gardener; by John Lambert's gardener, and a few specimens by Wm. Johns.

Premiums awarded on this occasion—viz:

By the committee on plants and flowers. For the best and for the second best Pelargoniums, to Robert Buist. For the best Perpetual Roses, to Benj. Gul-

liss; for the second best to William Hall. For the best and most interesting collection of Plants in pots, to Maurice Finn, gardener to John Lambert; for the second best design of cut flowers, to John Gallagher gardener to Miss Gratz. For the best hand Bouquet, to Robert Kilvington. For the best basket of cut flowers to Thomas Ryan, gardener to C. Cope; for the second best William Hall. And for the best American Seedling Camellia shown this year, to Jas. Ritchie, which he has named "Caleb Cope," the silver medal of the society.

By the Committee on Vegetables—Cucumbers for the best, to Thomas Riley, gardener to Geo. W. Carpenter, Germantown. Rhubarb, for the best twelve stalks, to Samuel Cooper; for the second best, to Henry Cooper. Asparagus, for the best twenty-four stalks, to James M. Tage. Potatoes, for the best ten pounds, to Thomas Ryan, gardener to Caleb Cope. For the best and most interesting display of vegetables by a market gardener, to Anthony Felton, Jr. For the best and most interesting display by an amateur gardener, to John Gallagher, gardener to Miss Gratz. The Committee also noticed a very fine display of Cauliflowers, by Jno. Riley, gardener at the Asylum for the Insane, for which they awarded a special premium of two dollars.*

The Secretary reported that the seeds from the Botanic garden commission, Cape of Good Hope, S. Africa, had been received and would be distributed by the appropriate Committee.

A vote of thanks was accorded to Prof. S. S. Haldeman for the gift to the Society of a copy of his work on Latin Pronunciation for the use of Students of Botany, Zoology, &c.

The circular reported by the committee of finance by resolution of the society "expressive concisely of the objects, advantages and claim of the society" was submitted in printed form for circulation.

The eight gentlemen nominated at last stated meeting, for membership, were duly elected.

On motion, adjourned. **Tuo, P. JAMES,**
Recording Secretary.

* Mr. Riley kindly presented us with several of these fine cauliflowers, which were served up in rare style the next day by our friend McKibben, of the Merchant's Hotel, 4th street, Philadelphia, where, in company with several friends, we partook of them with much satisfaction. Some idea of their quality and size may be formed from the fact that they sold readily in market at 75 cents each.—*Ed.*

SCHEDULE OF PREMIUMS

*Offered by the Pennsylvania Horticultural Society,
Philadelphia, for the month of June.*

At the stated meeting on the 17th, at 8 o'clock, P. M.

PINKS.—For the best, six named varieties, 2 00
For the 2d best, do. 1 00

PINK.—For the best American Seedling, 2 00

GRAPEs.—For the best, 3 bunches, of a black var. 3 00
For the best, do. of a white var. 3 00

STRAWBERRIES.—For the best, two quarts of a named variety, 3 00

For the 2d best, do. do. do. 2 00

CHERRIES.—For the best, three pounds of a named variety, 3 00

For the 2d best, do. do. do. 2 00

The meetings of the society are held on Tuesday evening, by which arrangement persons who attend market in Philadelphia have an opportunity of com-

peting for premiums, as well as of visiting the rooms of the society. We are authorized to state that the members of the society will be much gratified to have them present on such occasions, either as competitors or spectators.

Chester County Horticultural Society.

The stated meeting for May was held in the Hall of the Society, in West Chester, on the 17th instant. T. C. BALDWIN, President, in the chair. Premiums were awarded as follows:

For the best 10 varieties of Pelargoniums \$1, to Paschall Morris & Co.
" the best ten varieties of Roses in pots \$1, to Paschall Morris & Co.
" the best display of Apples, 3 varieties \$1, to Ziba Darlington.
" the best Lettuce \$1, to Paschall Morris & Co.
" " " Asparagus \$1, to J. G. Darlington.
" " " Rhubarb \$1, to Paschall Morris & Co.

The display of specimens for the month was very good. P. Morris & Co. exhibited near one hundred specimens of green house plants, roses, evergreens, shrubs, &c. Among their evergreens were some of the most rare and beautiful varieties. The display of apples by Mr. Darlington consisted of the pennock, romanite, greyhouse and lady finger, well preserved. A. Marshall & Co. exhibited some strawberries, of the monthly variety, ripened in the open air. Joshua Hoopes, cactus in full bloom. W. T. Painter, tulips.

Dr. W. D. Hartman, chairman of the Committee on Insects, read a very interesting report on the seventeen years' Locust, which was ordered to be published in the papers of the county, and the Pennsylvania Farm Journal.

The proceedings of the Society's meetings were directed to be hereafter published in the county papers and the Pennsylvania Farm Journal.

The Society directed that their next *Horticultural and Industrial Exhibition* be held in the large saloon of the Society's Hall, in West Chester, on the 12th, 13th, and 14th days of June next.

T. M. Meredith, Esq., was duly elected a member.

J. D. PYLE, Sec'y.

W. Chester, May 20, 1851.

FARMING IN CALIFORNIA.—The country north of San Francisco Bay is one of the finest farming districts of California. A correspondent of the Alta Californian writes:

Annally, my farm, has under cultivation 150 acres potatoes, 30 do. onions, 30 do. wheat, 10 do. barley, 10 do. turnips, 25 do. beets, cabbage and maize 250 acres. For tenants—potatoes and other vegetables 120 acres. Independent of this, there will be within a radius of fifteen miles from Port Podega no less than 700 acres of potatoes planted this season, besides 200 acres of barley and wheat, and about 54 acres of vegetables. The whole quantity of potatoes planted in this section of country will amount to 950 acres; which, allowing a yield equal to that of last year's crop in Annally, (being ten tons per acre,) we will have an aggregate quantity of 9500 tons, which of itself will go far toward supplying San Francisco market. In Sonoma, Napa, Suisun, Suiscol and Pataloma, there will be large crops planted.

Domestic Department.

Female Industry, Accomplishment and Duty.

MR. EDITOR:—In contemplating woman, skilled in the various arts of life, thoroughly accomplished and complete in character, so constituted by her own efforts and aequirements, we feel there is something to admire—something real and true and abiding—something that will live, and last, when the fine complexion has lost its rose-tint, the eye its glow, and the hair its lustre.

Females of this age have not the same duties nor the same urgent necessities for untiring and unceasing toil, as those of an earlier period. Everything is changed, both in the facilities, and requisitions of labor. Yet woman need not, should not be useless, or feel herself exonerated from all responsibility, because her burden is a *lighter one to bear*. Neither should she feel the necessity of departing from her *appropriate sphere* for employment and occupation.

There is enough in her own allotted station to develope and engross her highest powers both of body, mind, and character, and if occupied as she should be, will never feel that her sphere is narrow and unimportant.

A thorough and right education, would open her eyes to the magnitude of her duties, and the strength of intellect requisite, to meet the demands of life, upon her highest capabilities.

There are a great variety of methods, in which female talent and industry may find ample scope.—The past furnishes many brilliant illustrations, and we may point to many in the present who are building monuments of lasting renown to female industry and effort.

But it is only by dint of application and perseverance that great results are ever accomplished. Unless there is some *habit* formed, something *undertaken*, life will pass away with but the trifles of the hour, and no trace will be left that an active human being had ever lived!

How full of blessing we may make every day of this short life, by our ceasless industry. Every gift which God has in his wisdom bestowed, should be cultivated to its highest capacity, that “He may receive His own with usury.” The mind—has not our Heavenly Father bestowed thinking, reasoning, intelligent faculties, that should not lie idle?

Whatever be the bestowment, use it as a priceless gift. There is time enough, means enough, employ them. Genius was formerly needed to aid forward the great car of necessity and labor, now there is ample room, and scope, for all that the human mind has power to accomplish.

If the time given to idleness, folly and extravagance, were appropriated to literature, science, art, and the various departments of usefulness in domestic life and society, what a wreath of beauty would blos-

som, where hang now but the dark withered leaves of the industry of a former age.

Wealth should not exonerate, but give the more leisure for real, lofty achievement, and successful effort, and a deeper and wide-spread influence through the great channels of benevolence and education.—Whose heart will not glow and beat with a warmer emotion when the female talent of Amercia, inspired by active industry and real goodness has deserved the applause of an approving world and the calm bright smile of Heaven.

L. G. A.

Chittenango, N. Y.

MR. EDITOR.—As you have done me the honor to forward to my address the April No. of your Pennsylvania Farm Journal, you will perhaps allow me, while making my acknowledgments, to add a remark, and offer a suggestion.

Your Journal will no doubt be eminently useful, and I trust also eminently successful. Such a publication, widely circulated, will give the hard-working, industrious farmer, all the benefits of such experiments and improvements, as agriculturists of means and leisure, may make and adopt. The great majority of the tillers of the ground are necessarily short of school learning. For instance, a man goes into a new section of country and commences farming. His means are small, and there is a vast amount of work to be done; much of which, such as weeding, making hay, and picking stones, can be done by small children.—He has children, he is unable to hire men, the work must be done, *ergo*, the children *must* stay out of school, and do it. They are not, however, necessarily *ignorant*; they have books, newspapers, and the great book of nature; but they have small opportunities for scientific research, and generally do as their fathers did before them. Such a publication as your Journal will be especially useful to this large class of men, as I before observed, and I trust that it will be widely patronized by the farming community.

But—while there are so many efforts made for the benefit of farmers; so many experiments tried, and the results noted; so many useful inventions made, for the speedier and easier performance of his labor; so much said and printed for his especial benefit; why is it that so little is said and done for the benefit of the farmer's wife, and the indoor economy and comfort of his establishment? I am certain that no class of women, on the face of the earth, work so hard and incessantly, and under such inconveniences as the wives and daughters of our pioneer agriculturists. I know very many women who, with several small children to take care of, perform all the work of their house, make butter and cheese, spin wool and flax, sew, knit, perhaps weave, and all this with no assistance whatever and no allowance for indisposition; for whatever they are unable to do this week, must lie over and be added to next week's task. Should

not something be done for the alleviation of their labors, and their improvement in their methods, and habits of household economy?

A simple suggestion, or statement of a fact, might save a large amount of labor, beside enabling the housewife to produce a better article, with a considerable saving of material. There are many, very many women, (ladies if you please,) in Pennsylvania who are capable of giving such instruction; many who, in passing through the trials of pioneer life, lighted upon improvements, and made little inventions, which not only tended to lighten their burden then, but have conducted largely to their present prosperous and comfortable condition. These ladies are capable, and probably willing to give their younger or less fortunate sisters, the benefit of their discoveries, if they had a medium through which to communicate.

Now, Mr. Editor, suppose you gentlemen, just for once, forego your jealously guarded prerogative of doing all the talking, and all the writing, and give up a page or so of the Farm Journal to our use, as a DOMESTIC DEPARTMENT, and invite the "wise women" to contribute of their intellectual wealth? All the benefits, you know, would ultimately accrue to yourselves, in the increase of your wealth and home comforts. And then you might allow us to aid each other in the management and education of our children, and also to enlighten each other on improved modes of floriculture; and to give useful recipes and specifics for such ills as afflict children, chickens, &c.

By the way, I have made a discovery in the floral kingdom which is worth disseminating. It was accidental like all important discoveries. I gave a sick child some hyacinths to amuse himself with, merely the flower stalks carelessly broken off, and the next morning, as they lay withering on my table, I pitted them, as I do all drooping things, and taking them up, thrust, with my pen-holder, holes in the earth of a pot in which plants were growing, and fixed the stalks in the damp earth. After a few hours they revived, but a few days subsequent, after the blossoms were withered, I drew them out to throw them away, and was surprised to find that they had formed bulbs at the bottom of the stems. Since then I have repeated the experiment, always with success. They invariably wilt at first, and sometimes do not straighten themselves up, until the seventh or eighth day. I have not tried any other flower, but intend this summer to make the experiment with tulips. Any lady may, in this manner, rear hyacinths from a withered bouquet.

LYDIA JANE PIERSON.

Liberty, Pa., May 15, 1851.

ONE cow well fed will be of more profit than two kept on the same fodder. This will also apply to other stock.

One ton of hay cut when the grass begins to blossom will produce as much milk as two tons cut when the seed is ripe.

Agricultural Societies.

Northumberland Agricultural Society.

Our friends in Northumberland are moving energetically, as will be seen by the following extract from a letter of a correspondent at that place:

"We have just organized an Agricultural Society. Our success very far exceeded our best hopes. Men from all parts of the county were present to participate—men of energy and character—and we have started under circumstances that larger counties might well envy.

President—SAMUEL HUNTER.

Vice Presidents—Jos. R. Priestly, James Cameron, George C. Welker, Wm. B. Kipp, Jacob Seesbolts, Samuel John, John Montgomery.

Recording Secretary—Wm. J. Greenough.

Corresponding Secretary—David Taggart.

Treasurer—Wm. L. Dewart.

Librarian—Wm. McCarty.

Managers—James Pollock, Amos E. Kapp, Jesse C. Horton, Alexander Jordan, John B. Heller, Saml. Shannon, Henry Reader, Daniel Lenker, Elisha Kline, Charles Riddle, William Deppen, and five others, whose names I have forgotten.

We will try to make Northumberland furnish her one hundred subscribers to the Farm Journal."

Lancaster County Agricultural Society.

MR. EDITOR:—I attended a special meeting of the Lancaster County Society on the 19th of May, and was much pleased with the spirit which characterized the proceedings, although I could not but regret that the attendance was so very slim. Scarcely a quorum was present, although business of importance claimed attention. This should not be, and our farmers and friends of the Society should now put forth a special effort to secure not only a full attendance at the meetings, but to render these meetings profitable and influential. Almost every county in the State is forming a Society. The Susquehanna, Montgomery, Bucks, and other County Societies are making preparations for holding their Annual Exhibitions. The Chester County Horticultural Society holds its Semi-Annual Exhibition during the coming month, and on every side we behold evidences of progress on the part of the farming community. Where is Lancaster, the "Garden Spot" of Pennsylvania—the agricultural centre of the State—the district which for a century, almost, has held the first place in agricultural importance? What is she doing to help the great reform that is going on throughout the State? I am sorry to say, literally nothing. A few noble, persevering men, are straining every point to wake up her farmers to a just sense of the importance of moving energetically and in a body: but so lukewarmly are they supported, that hope has almost abandoned them. The prospect ahead, (if the past be taken as a criterion) is any thing but cheering, yet those who have persevered thus far should not despair. There is a better day coming, although discouragement has marked every step for months past. Let us hope that the day will come and speedily, when this apathetic spirit will give way to energetic action—when our farmers will feel the importance of the position they occupy, and with a hearty good will, engage in placing our noble county in her true position.

A MEMBER.

May 25, 1851.

Book Notices.

Elements of Latin Pronunciation, for the use of students in Language, Law, Medicine, Zoology, Botany, and the sciences generally in which Latin words are used. By S. S. Haldeman, A. M., Professor of Natural History in the University of Pa. Philad. Lippincott, Grambo & Co. 1851. 8vo. pp. 76.

It is somewhat singular that among the numerous works devoted to Latin instruction which are published every year, the important subject of pronunciation should have been neglected to such an extent that this is the first American book upon the subject.

The assertion of John Walker, that the pronunciation of Latin cannot be ascertained, is still believed by many, although the subject has been fully discussed by the ancient grammarians; and upwards of fifty ancient authors have thrown light upon various point's. For example, the ancients assert that C and K have the *same* power, and that A E have a *double* sound, so that the first syllables of the German *Kaiser* and *leid*, and their originals, the Latin *Cesar* and *laedo*, are identical. The Portuguese retain the original sound of æ, and as they were the first to write many names of maritime cities, &c., we are thereby made acquainted with the mode of pronouncing words like *Shanghae* (shang-high.)

We observe a few typographical errors, such as a diaeresis mark in the middle of a word in §129. The name *VILCSIA* on page 76 should have been *VILXIA*; and if the 6th line from the bottom on p. 61, is intended as an imitation of Virgil's first line, the third and fourth words should have been *below* and *sud*.

Some new principles of etymology are laid down, and the origin of several words pointed out which were previously doubtful. According to these, it would seem preferable to refer the name *VACCINUM* (now applied to the *huckleberry*) to *NACCA* a *berry*, rather than to *HYACINTHUS*, to which the dictionaries refer it.

Parents interested in the question will of course have to determine whether their children shall be taught *Latin*, or some jargon which goes under the name; whilst those who are entrusted with this branch of education should study the subject more fully than the ordinary grammars enable them to do.

The Agriculture and Rural Economy of France, Belgium and Switzerland; from personal observation. By Henry Colman. Boston, 1848. Arthur D. Phelps. 8vo. pp. 304.

"In regard to any agricultural operation, or crop, or improvement, the most full, explicit, and practical directions are given, and every peculiar feature brought prominently forward. Many things are omitted because they are of doubtful utility, or of uncertain authority. His great object has been, not to publish theories, but to state facts; and the determined results of enlightened, exact, and conclusive experiments."—*Author's preface.*

Rural Economy in its relation with Chemistry, Physics, and Meteorology; or, Chemistry applied to Agriculture. By J. B. Bonssingault. New York. D. Appleton & Co. 1850. 12mo. pp. 507.

The author of this volume is a member of the French Institute, and well known as a man of great scientific research. The work is extensive, and is devoted to those branches of rural economy which can be illustrated with the aid of the physical sciences. It consequently treats of the composition of vegetables and soils, the nature and applicability of the various kinds of mineral and organic manures, the theory of the rotation of crops, the maintenance of live stock, and the bearings of meteorology, or the general effects of temperature and atmospheric agents. The valuable researches of Mr. Boucherie on the preservation of timber are detailed in it.

We have been favored with a copy of the above works by Messrs. Jones & Co., Booksellers, 4th and Race streets, Philadelphia.

The Complete Farmer and Gardener. By Thomas G. Fessenden, New York: C. M. Saxton. 1851. pp. 650.

This thick volume of six hundred and fifty pages, is made up of two works bound together, the one devoted to farming, and the other to gardening. This is the *tenth* edition improved and enlarged, of the former; and the *thirtieth* edition of the latter, which had nine years start of the other. Such an extensive demand proves both the high estimation in which these books are held, and the extent to which a desire for information from reliable sources, has spread among the community of cultivators. The latter fact is also proved by the great number of works from small manuals to large Encyclopaedias, issued for the benefit of the same class of readers.

Mr. Fessenden's position as editor of the *New England Farmer*, gave him facilities for preparing these works, and he has made a judicious use of his materials.

Bulletin of the American Art-Union, New York. Series for 1851. April, No. 1.

The American Art-Union publishes for its members alone, The Bulletin of the American Art Union, a monthly Journal of Art. The first number for 1851, has been received. We perceive that it contains the affairs and plan of the institution, with interesting varieties of art-literature, including essays, descriptions, anecdotes, criticisms, and foreign and domestic correspondence,—also of a dictionary of art, embracing biographical notices of artists, ancient and modern, American and foreign, living and dead, technical terms of art and science, &c. Each Bulletin is also to be illustrated by several original engravings, outlines, and prints of an interesting character. The whole will form, annually, a beautiful and useful quarto volume, for amusement, instruction and reference.

Merino Sheep.

SPANISH MERINO.—“The history of this celebrated race of sheep, so far as it is known, has so often been brought before the public that it is deemed unnecessary here to recapitulate it. The first importation of them into the United States took place in 1801. Four were shipped by Mr. Delessert, a banker of Paris, three of which perished on the passage. The fourth arrived in safety at Rosendale, a farm owned by that gentleman near Kingston, in this State. The same year Mr. Seth Adams, of Massachusetts, imported a pair from France. In 1802, two pairs were sent from France by Mr. Livingston, the American Minister, to his estate on the Hudson; and later the same year, Mr. Humphrys, our Spanish Minister, shipped two hundred, on his departure from that country, for the United States.” Hon. William Jarvis, of Weathersfield, Vermont, then

American Consul at Lisbon, sent home large and valuable fleeces in 1803, 1810, and 1811. The particularly favorable circumstances for obtaining the choicest sheep of Spain, under which these were procured, you will find detailed in a letter to me from Mr. Jarvis, dated December, 1841, published in the Transactions of the New-York State Agricultural Society of that year. Various subsequent importations took place, which it is not important to particularize.

The Merinos “attracted little notice, until our difficulties with England led to a cessation of commercial intercourse with that power, in 1808 and 1809. The attention of the country being then directed toward manufacturing and wool-growing, the Merino rose into importance. So great, indeed, was the interest excited, that from a thousand to fourteen hundred dollars a head was paid for them.” Unfortunately some of the latter importations “arrived in



MERINO RAM.

[*Defiance*, 17 months old, bred by and property of Henry S. Randall.]

the worst condition, bringing with them those scourges of the ewe race, the scab and foot-rot. These evils and the increased supply, soon brought them down to less than a twentieth part of their former price; they could now be bought for \$20 a head.— When, however, it was established, by actual experiment, that their wool did not deteriorate, as had been feared by many, in this country, and that they became readily acclimated, they again rose into favor. But the prostration of our manufactories, which soon after ensued, rendered the Merino comparatively of little value, and brought ruin to numbers who had purchased them at their previous high prices.— The rise which has since taken place in the value of fine wool, as well as the causes which led to it, are too recent and well understood to require particular notice. With the rise of wool, the value of the sheep which bears it has of course kept pace.

“The Merino has been variously described. This arises from the fact that it is but the general appellation of a breed, comprising several varieties, presenting essential points of difference in size, form, quality and quantity of wool.” And writers of high author-

ity differ even in their descriptions of these families or varieties. M. Lesteyrie, so celebrated as a writer on sheep, and particularly on the Merino, and Mr. Jervis directly contradict each other on several points. It is scarcely necessary now to quote their conflicting statements, or inquire which is right—as the questions involved possess no practical importance. The families have, generally, been merged, by interbreeding, in the United States and other countries which have received the race from Spain. Purity of *Merino* blood, and actual excellence in the individual and its ancestors, has long since been the only standard which has guided sensible men in selecting sheep of this breed. Families have indeed sprung up, in this country, exhibiting wider points of difference than did those of Spain. In some cases they doubtless owe it to particular courses of breeding—but more often, probably, to concealed or forgotten infusions of other blood.

The American Merino has, as is already intimated, diverged into families or varieties presenting wide points of difference. The minor distinctions are numerous, but they may all, perhaps, be classed under

three general heads. The *first*, is a large, short-legged, strong, exceedingly hardy sheep, carrying a heavy fleece, ranging from medium to fine—free from hair in properly bred flocks—somewhat inclined to *throatiness*, but not so much so as the Rambouillet—bred to exhibit external concrete gum in some flocks, but not commonly so—their wool longish on both back and belly, and exceedingly dense—wool whiter within than the Rambouillet—skin the same rich rose-color. The ram is a good specimen of this variety, though his age is not sufficient to give him the substance and compactness of an older animal, and the apparent want in these particulars is heightened by recent shearing. His first fleece of well-washed wool, at thirteen months old, was 8 lbs.; was of beautiful quality, and entirely destitute of hair. At three years old he would have sheared from 10 to 12 lbs. of well-washed wool.—*Randall's Sheep Husbandry.*

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In order that the FARM JOURNAL may be placed within the reach of every one who feels interested in the progress of Agriculture, we ask attention to the following terms:—

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FIVE " - - -	4 00 " "
TEN " - - -	7 50 " . "
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It is not required that all papers in a club should be sent to one office. We will mail them (in wrappers,) to as many different offices as may be necessary. We make this arrangement in order that persons residing in different neighborhoods may unite, and form large clubs, and thus secure the "JOURNAL" at the very lowest club rates.

Specimen copies of the JOURNAL will be sent on application, *Post-paid*, to the publisher.

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Our Terms are **CASH IN ADVANCE**. The exceedingly low rate at which the Journal is furnished renders this imperative. Subscriptions may be sent at our risk, and money at par where subscribers reside, will be taken. Where the sum to be sent is large we prefer that a draft should be procured, if possible.

Subscribers and Post Masters are invited to act as Agents. A receipt will always be sent with the first number of the copy subscribed for.

All letters must be addressed, *post paid*, to the publisher.

A. M. SPANGLER,
Lancaster, Pa.

RESOLUTIONS ADOPTED BY THE EXECUTIVE COMMITTEE OF THE STATE AGRICULTURAL SOCIETY.

Resolved, That we deem the establishment and success of an Agricultural Journal published in Pennsylvania as essential to the proper exposition of the principles of agriculture as practised in our State.

Resolved, That we approve of the plan of the "Pennsylvania Farm Journal," published in the city of Lancaster, by A. M. Spangler and edited by Prof. S. S. Huldebrand: that for the present it be adopted as the organ of the State Society: and that farmers and all others interested in the subject of agriculture be advised to patronize it and contribute information to its columns.

THE FARM JOURNAL.

Sub-Editor's Department.

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and of Booksellers generally.

Cicada septendecim.

The seventeen-year cicada (or locust) is now (May 20,) appearing in Eastern Pennsylvania, and as it appears in different years in various parts of the country (sometimes *twice* in seventeen years, by two regions bordering and overlapping) it is important that the regions over which it extends should be noted, that they may be marked upon a map, and thus presented at a single view. We therefore request all editors to aid in collecting information upon the subject.

Maps should be constructed for each year in which these insects appear, because as they are likely to emigrate, or to be driven by storms beyond their former limits each time that they appear, they must finally cover the whole country like the other species, which, though they appear every year, are in all probability seventeen years in coming to maturity.

Miss M. A. Morris has discovered that the larva of the insect in question does not penetrate the soil to a great depth, but attaches itself permanently to the roots of trees, enclosed in a kind of cocoon made of clay. She made the discovery by examining the roots of some peach trees which were in an unhealthy condition, when she found the larvæ as described, with the rostrum piercing the bark of the tree, and thus withdrawing its juices.

WE regret that in our last number, it was unintentionally forgotten to credit the articles on the *Dorking Fowls*, as well as the *Devon Ox*, to their proper sources. The first was from "Brown's American Poultry Yard," and the latter from Youatt & Martin's celebrated work on Cattle. Both of these books are published by Mr. C. M. Saxton, 123 Fulton street, New York, to whom we are indebted for the cuts and other favors.

IN our notice of the new medal of the Pennsylvania Horticultural Society, in our last number, it was forgotten to state, that it was a gift to the Society, by the President, Caleb Cope, Esq., and that the cost of preparing it was several hundred dollars.

Acknowledgments.

To the following gentlemen we are indebted for handsome club lists. B. S. Russell, Towanda, Bradford co., three fine lists; Daniel Yoder, Manatauney, Berks co.; James Gowen, Mt. Airy, Philadelphia co.; Dr. J. K. Eshleman, Downingtown, Chester co.; Solomon Landis, Harrisburg; Hon. L. Kidder, Wilkesbarre; Henry Reigart, Williamsburg, Blair co.; Dr. John P. Taggart, Bloomsburg, Columbia co.; Benjamin Hood, Willistown, Chester co.; Geo. H. Bucher, Hogestown, Cumberland co., two lists; Alfred Taylor, on behalf of the Horticultural Society of West Philadelphia; Paschall Morris & Co., West Chester, Chester co.; John King, Ceres, Allegheny co., N. Y.; John Renshaw, Littlestown, Adams co.; Thomas Vanderslice, Valley Forge, Chester co.; N. P. Brower, Philadelphia; Joseph Kelley, Spruce Hill, Jnniata co.; Isaac Markley, Norristown; David Taggart, Northumberland, two lists; Hon. Geo. Chambers, Chambersburg; P. B. Mingle, Philadelphia; John E. Shaffer, Elizabeth, Allegheny co.; J. Coover, Shepherdstown, Cumberland co.; Samuel Shearer, Reading Furnace, Berks co.; R. Bnist, Philadelphia; Isaae Leech, Philadelphia co.; Thomas F. Croft, Philadelphia, three lists; H. L. Tripler, Philadelphia; John Kerves, Old Fort, Centre co.

The above lists are all independent of single subscriptions received, and are gratifying evidences of the general interest felt throughout the State in behalf of the Journal. But from some of our finest agricultural districts, we have not had much encouragement. Will not some friends in Washington, Westmoreland, Fayette, Bucks, Susquehanna, York, &c., send us on clubs. Will not Lancaster give us a stronger evidence of her regard. We look for much from Lancaster County, and hope before the issue of our next number to be able to state that she too has come up to the good work, with the spirit that will convince her sister counties, that the "garden spot" is thoroughly awake on the subject.

Grand Ploughing Match.

By a reference to the proceedings of the convention given below, it will be seen that the ploughmen of Bucks, Lancaster, Montgomery and Philadelphia counties are to have a fine opportunity of testing their skill with the plough. Such trials cannot but have a most salutary effect, and we trust that each one of these great counties will be well represented in the contest.

For the information of manufacturers of ploughs not residing in any of the above named counties, we will state, that if they desire to compete for the premiums, they can do so only by having their ploughs entered by ploughmen residing in the above counties. This is important to be understood, as it is a matter of great moment to have a plough introduced into the contest by a person well skilled in the use of it.

Newspapers friendly to this laudable contest will

confer a favor by giving the proceedings an insertion, and calling attention to them.

PROCEEDINGS.

Agreeably to a series of resolutions passed recently by the Philadelphia Society for Promoting Agriculture, proposing a ploughing match between this and several neighboring counties of the State, a meeting was held yesterday morning, at the room of the Philadelphia Society, to make preparations for the object in view. The following gentlemen were present as delegates, to wit: Thomas Warner and William Stavely, of Bucks county; Hon. A. L. Hayes, Jacob T. Herr, and Andrew M. Spangler, of Lancaster co.; Hon. Wm. Henry, William Hammill, Edwin Moore, Samuel Roberts, and Thomas Knox, of Montgomery co.; Dr. A. L. Elwyn, P. R. Freas, James S. Hulber, Peters Hulme, A. T. Newbold, George Blight, Saml. Williams, John Lardner, and Owen Sheridan, of Philadelphia county.

The meeting was organized by the election of the Hon. A. Hayes as chairman.

It was resolved that each county participating in the proposed contest, shall be at liberty to select such plough or ploughs as it may prefer, and that a general invitation be extended to the manufacturers of ploughs, every where, to send their respective ploughs for trial on the occasion,

It was further resolved that the ploughmen who are engaged in the contemplated contest shall come from, or belong to, one of the several counties between which the match is made.

Norristown, in Montgomery county, was designated as the locality at which the match shall take place, and the first Tuesday of October was fixed upon as the time.

It was also resolved that the contest shall be confined to the ordinary plough, excluding the hill-side and subsoil ploughs.

Three grades of premiums were provided for ploughs, and three for ploughmen, as follows:

FOR PLOUGH.	FOR PLOUGHMEN
1. Premium, - - \$50	1. Premium, - - \$25
2. " " 30	2. " " 15
3. " " 20	3. " " 10

The judges for the occasion are to be appointed by each county for the agricultural society thereof, and it was resolved to recommend to each county or county society concerned in the match, to raise respectively a proportionate share of the money to be distributed in premiums.

The judges of the contest are to be empowered to make the rules and regulations for its decision, and are to publish the same at a suitable time, antecedent to that at which the match is to take place.

The committee of arrangements for the occasion is to be appointed by the Montgomery Agricultural Society.

As soon as the judges are appointed in each county, the fact is to be communicated to the Philadelphia Society, which is authorized to call a meeting of the judges at such time and place as may be deemed expedient. After settling some other less important preliminaries, the meeting adjourned.—*North American of May 20.*

To Correspondents.

Having determined upon issuing the Journal for the future regularly on the first of the month, we have been compelled to defer several communications received too late for insertion in the present number.

Peysson's Deodorizer.

A. S. Roberts, Esq. will please accept our thanks for a copy of the report of "the Committee appointed by the Philadelphia Society for Promoting Agriculture to examine the method and propositions of Mr. Peysson for the disinfecting and cleansing of cess-pools, and the manufacturing of chemical manure."

We regret that we have not room for the entire report, as it is an able document, and the subject one of the highest importance. We give the most important parts of it.

"The disinfection of cess-pools and the purification of the atmosphere affected thereby, have long engaged the attention of the scientific; while the economical application of the fecal and other matters of large cities is of primary importance, especially to a community like ours, surrounded by an agricultural country, the soil of which requires constant replenishing to sustain its productive powers.

In the city of Paris more successful modes have been adopted than elsewhere; and the result is highly promotive of cleanliness and health, while the profit is represented as being very large. This may readily be admitted, when, according to Liebig, Dempsey, and others, the nitrogen resulting from any amount of population is equal to the supply required for two pounds of bread per diem for every one of its members; and the total manuring matter, solid and liquid, produced in a town are, as computed by G. D. Dempsey, C. E., equal in weight to one ton annually for each inhabitant.

In London, the subject of sewerage, drainage and cleaning of cess-pools is engaging increased attention, and various means have been proposed to the Metropolitan Commission of Sussex for collecting and applying to the improvement of the soil and the vast amount of animal and vegetable substances that is constantly drained into the river Thames.

The jealousy and care with which night soil is husbanded throughout almost the whole of Europe, is one of the best evidences of the high value placed upon it. The Chinese preserve it with the greatest care, and after mixing it with a rich marl and forming it into cakes it becomes a regular article of traffic. The committee proceed to say:

There are, however, in our large city, immense quantities of animal and vegetable matter suffered to go to waste, and the collection and useful conversion of which are embraced in the plan of Prof. Peysson, in addition to an entire change of the present rude and offensive cess-pool constructions, which it is hoped "may soon be reckoned among the obsolete mistakes of our forefathers." Such is the care bestowed on the collection of fertilizing substances in Paris, that nothing capable, through the agency of the chemist, of being converted into manure, is suffered to waste. The abattoirs, or public slaughter houses of that city, contribute largely to the preservation of health, economy and comfort of the inhabitants; our public authorities would do well to establish similar regulations in the city and county of Philadelphia.

The same remarks will apply to every town and village in the State and elsewhere, for in addition to its value as a manure, in a sanitary point of view it becomes highly important.

Mr. Peysson's method of disinfecting and converting fecal matter into manure, more particularly en-

gaged our attention as the proper inquiry for an Agricultural society.

His process, or the materials used, we were apprehensive might effect destructive decomposition, and deteriorate the fertilizing properties of the substances acted on.

A close and careful examination, however, satisfied Prof. Boye that the fertilizing principles of his chemical manure are not impaired, and that he can, by the proper application of the materials used, disinfect or deodorise fecal and offensive substances.

We understand from Mr. R., one of the committee, that since the publication of the report, experiments have been made on the farm of James Gowen, Esq., at Mt. Airy, to de-odorize in the presence of one of the committee the contents of an old cess-pool, and that the result was highly satisfactory. It remains now to be seen whether its value as a fertilizer will be lessened. The use of quick lime will destroy the offensiveness of night soil, but has the effect to drive off the ammonia, and hence impairs its value for manuring purposes. Whether by Mr. Peysson's method, this difficulty will be obviated, we shall learn at some subsequent period, from Mr. Gowen, who has promised us the result as soon as ascertained.

Mr. Roberts, appropriately remarks, that the quantity of valuable manure that is annually "cast into the sea" is immense, and if but a tithe of it were saved, we might well dispense with the importation of Guano—that a concentrated manure more applicable to general purposes than Guano might be prepared, and cheaply too, wherever a dense population exists. I have not the remotest doubt, and hope a practical demonstration will soon be made.

Newland's Mammoth Alpine Strawberry.

We are indebted to Mr. Newland's agent in Philadelphia, Mr. T. B. Phelps, N. E. corner of Third and Chestnut streets, for one hundred of these fine plants. They come highly recommended and we cannot but think them a very superior variety. Mr. Newland says:

"These strawberries differ from many other varieties, viz: flavor, bearing and cultivation. The flavor is much sweeter, though rich and delicious. The bearing continues about two months, (most others only two or three weeks,) and begin to ripen about the first of June. The cultivation is easy, the plants being hardy, and producing perfect fruit set alone, or fertilised by other varieties. With proper cultivation (for which printed directions will be given) the plants will become large hills in one season, and continue bearing three or four years without being re-set.—The season of 1849 in the city of Providence, one plant, one year old, produced 268 ripe berries by the 16th of July, and measured 28 $\frac{1}{2}$ inches across, and one plant three months old produced 205 berries. Some of the fruit has measured three inches in circumference."

We have placed the plants in good hands and expect to be able to present our readers with a good account of them at some future day. As many persons think the season too far advanced to set out the plants, we will state that they have been purposely retarded for *late setting*, and that they have been set out with great success even in the month of June.

We shall take pleasure in forwarding any orders to the agent for these plants.

CROASDALE'S SEED DRILL AND BROADCAST SOWER.—Since our last, we have had an opportunity of examining this useful implement, and cheerfully commend it to the attention of the farming community. Simple in construction, yet accurate in its work, and at the same time furnished at a price which places it within the reach of every farmer, we cannot but think that it will become the favorite drill for farmers.

For the benefit of our Lancaster County readers, we state that one of these drills may be seen for a short time at Hnbley's Swan Hotel, Lancaster City, where Mr. Carr is in attendance to give all necessary information in regard to it.

The annexed certificate from a practical farmer in our immediate vicinity, will be read with interest in connection with the advertisement to be found on the second page of the cover of this number, to which we call attention.

I certify that I used Croasdale's Patent Seed Drill and broadcast Sower in putting in part of my wheat crop last fall.

It was put two drills in each furrow on a corn stubble and the whole work was done at *one* operation, (seeding and plowing at the same time) in the most satisfactory manner.

Where known it must come into general use—in my judgment it surpasses all other drills, because it can be attached to ANY PLOW and used wherever a plow will work; it puts the seed in one drill of any width you choose to plow or two drills in each furrow, or it will spread the grain over the furrow any width preferred. It is the simplest, best and cheapest machine that I have seen.

From the above it will be seen to be more rapid than the large drills. DANIEL POTTS.

Millport Mills, East Lampeter township, Lancaster co., May 28, 1851.

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HAS always on hand at his seed Store, 97, Chestnut Street, Philadelphia, a large stock of Seeds of his own growth, a *very important item to purchasers*, as he is a practical grower, and has been engaged in his profession over 30 years. His nursery ground is amply stocked with Fruit, Shade and Ornamental Trees, accurately named and properly cultivated. Every article sold at the lowest rates, and warranted to be as represented.

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You may depend upon it, that the articles thus manufactured and will cure—and that any one of the receipts is worth more than you will have to pay for all of them. Address (Postage paid,) JUNE 1, 1851) HILLS & CLARK, Elmira, Chemung co., N.Y.

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DEVOTED TO

Science, Literature and General Intelligence.

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FOWLERS & WELLS,
April—3m No. 131 Nassau street, New York.

The Great Michigan PLOW.



FOR SOD AND SUB-SOIL.

THIS Plow, in the language of the Report of Committee on the great trial of Plows in June last, appointed by the New York State Agricultural Society, (by whom it was awarded a SPECIAL PREMIUM): "We regard this implement as a *most useful present* from the mechanic to the farmer, and in our opinion will effect a great improvement in the tillage of land. It *pulverizes the soil* in an excellent manner, which, to be fully appreciated, must be seen; and it accomplishes this pulverization with an amount of power which, in reference to the work performed, is certainly not large. It *buries the sod completely*, and covers it with a coating of loose earth which makes a seed bed almost as perfectly as a spade."

At Boston, last season, this Plow was awarded a *Gold Medal*, and at every County Fair in the State of New York, at which it was exhibited, the Proprietor received a *Premium*.

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WAREHOUSE & SEED STORE,
High Street, near the Horticultural Hall,
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THE subscribers in connection with their extensive Nursery Garden, and Green House establishments, have erected a large Warehouse, and will keep constantly on hand and for sale, a complete assortment of *Agricultural and Horticultural Implements*, consisting, in part of Horse Powers and 'Threshers, Plows of different sizes and patterns, among which are the celebrated "Eagle Self-sharpening," Prouty & Mears' Centre Draft, Subsoil, Sidehill, &c., &c., Harrows, Cultivators, Wheat Drills, Seed Sowers, Corn planters, Fanning Mills, Corn shellers, Straw and Hay Cutters, Chaffs of various sizes and patterns, Harvesting tools of every description; in a word, every implement necessary to the Farmer and Gardener, and of the most approved kinds and patterns can be had at our Warehouse. Also, field, grass, and garden seeds of every variety.

At our Nursery will be found our usual large assortment of Fruit and Ornamental Trees, Shrubbery, Grapevines, Green House Plants, &c., &c.

Westchester, Pa., June 1, 1851.

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A large quantity of Arborvitae for Screens, and Buckthorn and Osage oil Hedge plants.

The above will be sold on as liberal terms as similar stock can be purchased elsewhere. For further particulars we would again refer to priced Catalogue. A liberal discount will be made to persons who buy, to sell again, and extensive planters, on their own account.

Seed and Agricultural Warehouse, 194½ Market Street, Philadelphia.

WE offer to our friends and customers, the largest assortment of Agricultural implements, Garden tools, and Seeds, ever offered in this Market, consisting in part of the following, viz:—Prouty and Mear's Patent highest premium self-sharpening Ploughs, right and left handed side hill Subsoil, of various sizes, of superior materials and workmanship, warranted to give satisfaction, or the money returned—Four highest premiums awarded to these Ploughs at the New York Fair, 1850. Also, Beach and Car Share Ploughs; Spain's improved Barrel Churn, constructed in such a manner that the dasher may be removed from the inside of the Churn, by simply unscrewing the handle from the dasher. Hay, Straw and Corn-stack cutters, in great variety, among which may be found Hovey's superior premium straw-cutters, of every size.

Also, Horse-power Threshing Machines, Fan Mills, Corn Shellers, Cheese Presses, Seed Thusters, Dirt Scrapers, Sugar Mills, Ox Yokes and Bows, Turnip Drills, Horse Rakes, Swathe Scythes, Concaved Hoes, Spring Tempered Cast Steel, Oval and Square Manganese and Hay Forks, Pruning Shears and Chisels, Beach and Bar Share, repairing pieces and castings, Peruvian, Patagonia and prepared Guano, together with a complete assortment of grass, garden and field seeds, all of which will be sold at the lowest possible prices, at 194½ Market street, Philadelphia.

April 9—tf

PROUTY & BARRETT.

IMPORTANT TO FARMERS

And Threshing Machine Makers.

THE subscriber respectfully begs leave to inform the public that he has lately perfected a new Threshing Machine and Horse Power, which in point of strength, durability, lightness of draught and convenience in moving, is not surpassed or equalled by any Machine in the United States; he also confidently affirms that no Machine of its strength and durability can be afforded as low—The invention of this Machine has been the result of several years experience and hard study. We do not claim to have discovered any new principle in philosophy—but we do claim to have discovered a plan by which old philosophical principles are more correctly and advantageously applied than on any other Machine. This invention is secured by a caveat.

These Machines can be had at Israel W. Groff's Machine Shop and at Prime & Colestock's Sash Factory in North Duke street, Lancaster city, at retail or by wholesale on the most reasonable terms.

The Power weighs 600 pounds. It is made entirely of Iron with Steel Journals, and is warranted to hold 8 Horses should it any time be necessary to use so many. From 2 to 4 Horses are a sufficient number for common threshing. We are about getting up one much lighter for Shop purposes that will be the cheapest and most convenient thing in use; it might also be used with 2 or 3 Horses for threshing; the Powers and Cylinders and Concave can be had by the Machine makers throughout the country on the most reasonable terms.

All orders directed to the subscriber at Lancaster city will be thankfully received and promptly attended to.

Lanc'r, April

SAMUEL PELTON, Jr.

Gilmore's Bee-Hive, &c.

THE attention of Bee culturists is invited to this improved plan.

Mr. Gilmore is a gentleman of great experience and success in the culture of Bees; his improvement is the result of many years trial; his result has no parallel in the history of the past.

The Agent of the "Pennsylvania Farm Journal" is the Agent of Gilmore's System of Living and Feeding the Bee in this State.

The price of a Hive and Fixtures. \$3.00
Township Rights from \$10 to \$20.
County " " \$30 " \$200.

"A Talk about the Honey Bee," a defence of Gilmore's system, contains, also, testimonials, awards of Premiums to Gilmore, from the leading Fairs and Institutes in this Country; 12 cents single; \$1.00 per dozen—gratuit to patrons.

Circulars sent to any applicant. Address, post paid,
April—tf J. B. MAYNARD,
Lancaster, Pa.



HAVE been distributed throughout the Union. The concern has been in successful operation for upwards of *Sixty Years*, and may be said to have grown up with the City of Philadelphia, where it was at first located. It has been gradually enlarged to meet the growing wants of the public, and is now, as it ever has been, the most extensive of its kind in this country. The grounds in cultivation being ten-fold greater than those of any similar concern in the United States.

As the Seeds sold by the proprietor are (with slight exception) of his own raising, he is, consequently, enabled to ~~not~~ *Warrant* them, a matter of importance to the purchaser of an article, the quality of which cannot be determined by the eye. Descriptive Catalogues in English and German gratis.

Also for sale, Implements for Farm and Garden in large variety.
LANDRETH'S Agricultural Ware House,
April Sign of the Plough, 65 Chestnut st., Philadelphia.

The Water-Cure Journal for 1851:

DEVOTED TO

Physiology, Hydropathy and the Laws of Life.

THE WATER-CURE JOURNAL is published monthly, illustrated with engravings, exhibiting the Structure, Anatomy, and Physiology of the Human Body, with familiar instructions to learners. It is emphatically a JOURNAL OF HEALTH, adapted to all classes, and is designed to be a complete FAMILY GUIDE in all cases and in all diseases.

The PHILOSOPHY of HEALTH, will be fully discussed, including Food, Drinks, Clothing, Air, and Exercise, showing their effects on both body and mind.

Terms in Advance: Single copy, one year, \$100; Ten copies, one year, \$70.

N. B.—Please address all letters, post paid.

FOWLER & WELLS,
No. 131 Nassau street, New York.

April—3m

"Get the Best."

ALL young persons should have a standard DICTIONARY at their elbows. And while you are about it get the best; that Dictionary is NOAH WEBSTER'S, the great work abridged. If you are too poor, save the amount from off your back, to put it into your head.—*Phrenolog. Journal.*

Dr. Webster's great work is the best Dictionary of the English language.—*London Morning Chronicle.*

This volume must find its way into all our public and good private libraries, for it provides the English student with a mass of the most valuable information, which he in vain seeks for elsewhere.—*London Literary Gazette.*

The very large and increasing demand for this work, affords the best possible evidence to the publishers that it is highly acceptable to the great body of the American people."

Containing three times the amount of matter of any other English Dictionary compiled in this country, or any Abridgment of this work.

Published by G. & C. MERRIAM, Springfield, Mass., and for sale by W. H. SPANGLER, Lancaster, Pa. April,

NEW YORK**Agricultural Warehouse & Seed Store,**

189 and 191 Water Street.

THIS is by far the most extensive establishment in New York. It occupies nearly the whole of three large five-story stores, and contains a varied and complete assortment of every description of Agricultural and Horticultural Implements, and Field and Garden Seeds required in the United States. We have upward of One Hundred of the latest improved kinds of Plows, mostly manufactured by us, expressly for the different States of the Union, California and Oregon, the British Province, the West India Islands, Mexico, and South America. Also Harrows, Rollers, Seed Sowers, Cultivators, Horse Powers, Threshers, Corn Stellers, Reaping and Mowing Machines, Hay, Cotton, Tobacco, Oil, and Dry Good Presses, Brick Machines, Shovels, Spades, Hoses, Manure and Hay Forks, &c., &c.

Garden Implements.—These are imported by us direct from the English manufacturers, or made here to our order. They consist of a great variety of the choicest kinds such as Trenching and Weeding Forks, Pruning and Hedge Shears, Flower and Twig Cutters, &c. The assortment for ladies is particularly choice and well selected.

Field and Garden Seeds.—These are grown expressly for us both in Europe and this country. They are of the choicest kinds, and of great variety. We also obtain, as soon as sufficiently tried and well approved, every new kind of seed suitable to be cultivated in the United States.

Fertilizers.—Peruvian and Patagonian Guano, Bonedust, Pond-rette, Plaster of Paris, &c.

Manufactory of Agricultural Implements.—We have a large manufacturing establishment in this city, where we will promptly make to order any new article or implement required by the Farmer or Plauter.

Excelsior Sand Paper.—A new and very superior kind, of the different numbers in use by Machinists, Cabinet Makers, &c.

The American Agriculturist, a monthly publication of 32 pages. Price one dollar a year. A. B. ALLEN & CO.

April 189 and 191 Water-street, New York.

Heinitsh's German Cattle Powder.

THIS Powder is celebrated for the cure and prevention of all diseases to which Cattle, Milch Cows, Sheep and Pigs are subject, and is the only preparation upon which full confidence can be placed. For Milch Cows it is of the greatest importance, wonderfully increasing the quantity and quality of their milk, and will effectually prevent and cure Hollow Horn, Murrain, &c.

VEGETABLE HORSE-POWDER.

Which will cure Distemper, Hidebound, Loss of Appetite, Founder, Yellow Water, Lowness of Spirits, Inward Sprains, Inflammation and Heat in the System, and all other diseases to which Horses are subject.

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Medicinal, Drug and Chemical Store, No. 13 East King st.,
April—tf Lancaster.

**New and Popular School Book.**

THE COMPREHENSIVE SUMMARY OF UNIVERSAL HISTORY, with a biography of distinguished persons from the earliest period to the present time; to which is appended an epitome of Heathen Mythology, Natural Philosophy, General Astronomy and Physiology, on the basis of "Historical and Miscellaneous Questions," by Richmal Maognal. Adopted to the use of American schools.

Published and for sale by E. S. JONES & CO.,
S. W. corner of Fourth and Race st., Philadelphia.

M. B.—Teachers and School Committees furnished with copies for examination. Address, post paid. April—tf

\$500 to \$2,000 aé Year.

1000 AGENTS WANTED.

IN all the States of the Union, to canvass for the following Important and Valuable Works, which are sold by subscription. We have now about two hundred Agents in the field, many of them clearing from two to eight dollars per day. It will be seen that they are all of a very popular and desirable kind, and calculated to please almost every taste. For further particulars apply (post paid) to the publishers.

DERBY & MILLER.

Auburn, N. Y.

"HOW A FARMER MAY BECOME RICHL."**BLAKE'S FARMER'S EVERY DAY BOOK,**

Or, how a Farmer can become Rich—being sketches of Life in the Country; with the Popular Elements of practical and theoretical Agriculture, and twelve hundred Laconics and Aphorisms relating to Morals, Regime and general Literature; also 500 Receipts on Health, Cookery and Domestic Economy; with 10 fine illustrations respecting the various scenes attendant upon farming, etc. By John L. Blake, D. D., author of "Biographical Dictionary," "Family Encyclopedia," &c.

The publishers respectfully announce, that they have undertaken the publication of this large and beautiful work, with a view to supply a desideratum that has long been felt—a book for every Farmer's Library; believing that the venerable author has produced a work that will be worth its weight in gold to every farmer's family that thoroughly peruse it. It is proper to state that Dr. Blake is a PRACTICAL FARMER, and has reclaimed a sterile and worn out piece of land into a valuable and productive farm—which experience, with his well known qualifications as an author, peculiarly fit him to prepare a book for farmers.

The work contains 654 pages, large octavo, with a motto surrounding each page—is printed on fine paper, and bound in substantial imitation Turkey Morocco, gilt back. Invariable retail price, \$3.00.

Agents wanted to canvass for the above.

FROST'S PICTORIAL HISTORY OF CALIFORNIA.

The History of the State of California, from the earliest period of her conquest by the Spaniards, to her acquisition by the United States; with an account of the discovery of the immense Gold Mines, and the quantity of Gold already obtained; the enormous increase of population; a description of the mineral and agricultural resources of the country; with adventures and travels among the Mines. Also, advice to Emigrants, as to the most desirable routes thither. To which is added the Constitution of the State of California; with numerous illustrations, and a map of California and the Gold Mines; in one octavo volume, 500 pages; bound in same style as Mexican War. Retail price, \$2.50.

"I am prepared—I have endeavored to do my duty."

THE LIFE OF ZACHARY TAYLOR,

Late President of the United States, including the closing scenes of his life and death. By H. Montgomery. Embellished with a steel portrait and 15 illustrations; in one elegant octavo volume, 463 pages, well printed on fine paper, and bound in substantial morocco, gilt back.

The lightnings may flash, the thunders may rattle,

He bears not, heeds not, he's free from all pain,

He sleeps his last sleep, he has fought his last battle,

No sound can awake him to glory again.

More than 20,000 copies of the above work have been sold by us and the demand is unabated. It is allowed by critics to be the most complete and authentic copy of any of the works purporting to be a Life of the Great Man of the Age. Retail price, \$2.00.

A COMPLETE HISTORY OF THE WAR BETWEEN THE UNITED STATES AND MEXICO,

From the commencement of the battles, to the ratification of the Treaty of Peace; containing a concise account of the splendid military achievements and glorious victories of the American Army under Generals Taylor and Scott, and their gallant compatriots in arms. Also, a concise account of the new El Dorado, the Golden Land of California, which was annexed to the United States by the treaty of peace. Illustrated with 24 portraits and battle scenes, and a steel likeness of General Taylor. By John S. Jenkins, author of "The Life of Silas Wright," "Lives of American Generals," etc., etc. The work is bound in elegant and substantial morocco, gilt back, and contains 526 pages. A fine Map of Mexico and California accompanies each book.

* * 12,000 copies of the above work have been sold by us, chiefly in N. Y. State. It is pronounced by critics as the only complete and impartial history of the war extant. Subscription price \$2.50.

April

**SCATTERGOOD & HOWELL,
DESIGNING, DRAWING****And Wood Engraving Establishment,**
Inquirer Building, Third Street, below Chestnut st.,
PHILADELPHIA.

WATERCOLOR DRAWING, PORTRAITS, BUILDINGS, MACHINERY, NEWS PAPER HEADS, LABELS, SEALS, &c. Drawn and Engraved in the Best manner and on the most reasonable Terms.

April—tf

Kettlewell & Davison's Salts against New York State Agricultural Works Guano.

A CHALLENGE!!!

THE deep interest now taken by Agriculturists in all descriptions of manure, would seem to justify any expedient, by which fair and unprejudiced experiments may be made of the various descriptions of manure at this time attracting the attention of the public. In view of this, and the undersigned honestly believing that the Chemical Compound, manufactured by them, is the best manure of which any knowledge is had for a *Corn Crop*; challenges Guano to the test upon the following condition:—He will forfeit One Hundred Dollars, to be presented to the Maryland Agricultural Society, if any advocate of Guano will do the same, that the Renovator compounded by Kettlewell & Davison, will produce upon any soil, the largest crop of *weighed corn*, without regard to the size of the stalk, provided the President of the State Agricultural Society will select some person, in his judgment qualified, to superintend the experiment. The nature of the soil to be described, so that each party can direct the mode of application; two barrels of the Salts to be used per acre, costing \$6, and 300 lbs. of the Guano, costing \$7 20, the party making the experiment to receive the manure free of cost. And the same amount against any manure as a top dressing upon timothy or clover.

JOHN KETTLEWELL.

Kettlewell & Davison again call the attention of Agriculturists to their various Chemical Manures—and in so doing, they would be insensible to common gratitude, if they failed to express their profound acknowledgments for the constant and increasing demand, which now lies upon them for their simple and compound manures. Each season has greatly increased their sales, extending as far south as South Carolina.

They can give no stronger evidence of their faith in the virtues of their manure, as the best known for a *corn crop*, than the tenders they make above; and the certificates which they herewith present. In the offer of a test, it is not the amount involved, but the willingness to challenge result, that speaks their integrity and confidence. We could add any amount to the testimony we publish; but if the names we refer to, do not command confidence, no additional number could. We have never boasted of the quality of our article, we have been content to leave a decision to time, demand and experiment, that has been in our favor—hoping, if we have less of "Bi-phosphates," the public would discover it, as they would if it was found we had more of "sand" than any thing else.

KETTLEWELL & DAVISON.

Office at Ober & McConkey's, corner of Lombard and Hanover Streets. Factory, Federal Hill.

BI-PHOSPHATES.

We keep constantly on hand this valuable manure. Bones, with a proper portion of the Sulphate of Ammonia, dissolved in Sulphuric Acid. The Chemists of this country and Europe have been pressing this mode of using bone-dust upon the attention of farmers, with great zeal and ability of recent years. Every experiment has confirmed the truthfulness of their theory; and we hazard but little in saying that in a very brief time it will be used in no other way. It is prepared so as to be sown similar to the salts, at the rate of one or two barrels to the acre—The price of this article is \$4 per barrel. Let the farmer who doubts, try it at a less expense than the old mode of using bone-dust.

TOBACCO GENERATOR.

This is a chemical compound, made expressly for the growth of the Tobacco plant. We will call more special attention to it at the proper season.

CHEMICAL RESIDIUMS.

We have constantly on hand Chemical Residiuums of every description. Full information of which can be had by application to us.

COMBINATION OF GROUND PLASTER AND POTASH.

This is a preparation made for soil deficient in Potash, of which deficiency there is, unfortunately, too many instances in much of our Maryland land. For this compound we are indebted to the suggestion of an accomplished Agriculturist of Prince George's county, who may at some future day present the result of his experiment. The price of this is \$2 50 per barrel.

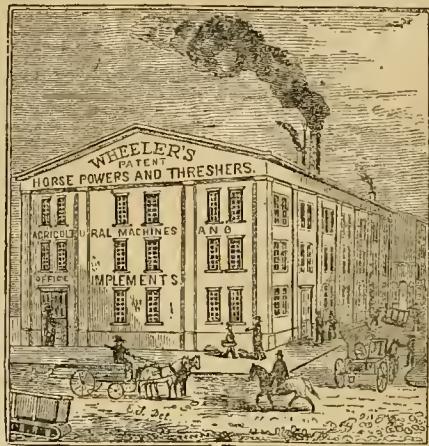
DIRECTIONS.

The mode of using the Renovator is simple, inexpensive, and requiring but little labor. The farmer must bear in mind, that in the preparation of his soil he shares an equal responsibility in testing the merits of any manure. Land negligently or badly cultivated gives no manure a fair chance. How to put land in order he ought to know better than we can teach him; and if he don't know, should learn as speedily as possible. The land, then, in order—if one barrel to the acre is used—and this quantity depends upon the quality of the land—it should, for grain be sown broad cast, and slightly harrowed in.

If two barrels are used, one as stated above, and the other as a top-dressing upon the wheat or rye, early in the spring, at the commencement of the first thaw. Upon grass it should be sown broad-cast upon the timothy or clover. On corn, either broad-cast or in the hill. Where two barrels are used, one each way.

PRICE of the RENOVATOR, \$20 PER TON, or \$3 PER BARREL.

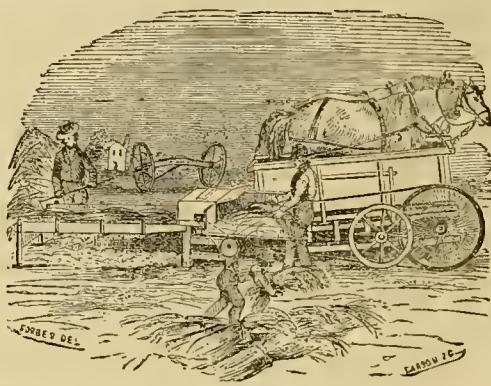
April—11



Agricultural Machines and Implements.

WHEELER, MELICK & CO.,

CONTINUE their manufactory at the corner of Liberty and Hamilton streets, ALBANY, where they are prepared to fill all orders with despatch.



ORDERS FOR

Wheeler's Patent Railway, Chain Horse Powers, and Overshot Threshers and Separators, will receive their prompt attention.

The large and increasing demand for these Machines has induced the Proprietors to erect a New and Spacious Manufactory, and otherwise extend their means of promptly filling orders.—Their Powers and Threshers have been sold in nearly every State in the Union, during the past year, and their superiority has been acknowledged by numerous testimonials, not only from Agricultural Societies but from persons who have used them. They have been awarded the First Premiums at all the principal Fairs where they have been exhibited in operation, including the Pennsylvania State Fair, the Provincial Fair of Upper Canada, and the Michigan and Ohio State Fairs, together with numerous County Exhibitions in the different States.

The TWO HORSE MACHINE, with from three to five hands, will thresh from 125 to 200 bushels of Wheat per day, or twice that quantity of Oats.

The One Horse Machine will thresh rather more than half that quantity.

PRICE AT ALBANY:

For Two Horse Machines	\$145 00
For One Horse	\$120 00

Machines will be shipped to order to any part of the United States or the Canadas, ~~and~~ and warranted to give satisfaction to the purchaser, or they may be returned within sixty days.

The subscribers also manufacture and will furnish to order the most approved kinds of

Feed Cutters, Clover Hullers, Circular Saw Mills, &c.
They will also furnish Horse Powers properly Geared for driving Churns, Elevating Grain, or other purposes to which Horse Power can be applied.

WHEELER, MELICK & CO.

April—24 Corner of Hamilton and Liberty sts., Albany, N.

PENNSYLVANIA FARM JOURNAL

VOL. 1.

LANCASTER, PA., JULY, 1851.

NO. 4.

THE FARM JOURNAL.

S. S. HALDEMAN, Editor.

Entomology. No. 3.

BY THE EDITOR.

The annexed figure represents a species of the genus *Carabus*, which is there presentative of an ex-



teensive family (*carabidae*) of voracious insects which destroy vast numbers of the larvae that feed upon plants. The insects of this family are therefore useful to the farmer and gardener, and our figure will enable them to be recognized without much difficulty. They generally hide themselves dur-

ing the day under stones and rubbish, coming forth at night to seek their prey, when they frequently enter houses attracted by the light. They run with agility, their feet are slender and their jaws strong, when caught they generally emit a dark liquid from the mouth, and many of them have a disagreeable odor. Their size varies from that of the figure (or considerably larger) to an eighth of an inch or less. *Calosoma scrutator* is larger than the figure, of a violet color, with the elytra of a beautiful green. We translate the following valuable remarks of a French observer, who has made use of the natural enemies of noxious insects to destroy them.

"A multitude of noxious insects, after having, for several years committed ravages upon our property, disappeared suddenly, without our being made acquainted with the cause. In looking more closely into these matters, one might be assured, in most cases, an enemy of the insect which has disappeared, has produced the happy result. I can furnish some proofs in support of this opinion.

"The thick foliage of a fine avenue of poplars, was

all at once attacked by an immense quantity of the caterpillars of *Bombyx dispar*. I thought of giving them the *Calosoma syceophanta* for company; as like them, it passes its life upon the trees, feeding upon the caterpillars which it meets, and even deposits its eggs in their nests, that its voracious progeny can procure nourishment more easily, and in greater abundance. This insect multiplied itself with a rapidity truly astonishing, and the caterpillars disappeared without those who were witnesses to the destruction, having the least idea of the causes which produced it." The author then gives it as his opinion, that the neighborhood of the city of Toulouse is not ravaged by the *Melolontha vulgaris* which is so destructive in other parts of France, because the *Carabus auratus* is very common in the fields, meadows, and gardens. It is known, he remarks, that the *Carabus auratus* seizes and devours the *Melolontha* previous to the deposition of its eggs; and that it is more fond of these, than of any part of the insect.

"One would be much deceived in believing that it is always easy to make an advantageous use of this means of destruction, a profound study of the manners of insects, being often indispensable to arrive at the end proposed. The most robust of our *Carabi*, the *Procrustes coriaceus Lin.* had served me admirably in the *centre* of France, to destroy the little insects which attack the plants in gardens. Here (in the *south*) this insect does not destroy the same species; and although very common, it is unknown, or hardly ever met with. The reason is, that in the centre, the west, and probably the north of France, this *Procrustes* is *diurnal*, requiring only cool and shady places. With us (in the south, under a warmer climate) it is, on the contrary, essentially *nocturnal*, and therefore destroys such insects as are, like itself, nocturnal; or which remain within its reach, during the obscurity of night.

"In transporting into my garden twenty of the *Carabus auratus*, I had thought to destroy the collections of *Ferficula* which had chosen it for the theatre of their ravages." To his great astonishment, the

Carabi, which will actually destroy the Forficula, were either found starved to death, or left the place; and the latter continued their devastations! The reason given is, that the Forficula are essentially nocturnal; and during the day keep themselves hidden in crevices, into which the Carabi cannot follow them. These latter, too, are only active during the middle of the day, and in the heat of the sun. But the resources of this persevering entomologist were not yet exhausted; his next expedient being to introduce a smaller carnivorous insect common in France, the Staphylinus olens, which, he remarks, "filled all the necessary conditions for the destruction of the Forficula."

"You see, then, gentlemen," says M. Boisgiraud, in conclusion, "that it is indispensable to study the manners and habits of destructive insects, that their instinct and address may be successfully employed for the destruction of the species able to do us injury. Then in place of barbarously crushing the useful species which have the misfortune to be not always ornamented with the rich colors of the butterfly or the Buprestis, we will endeavor to protect them and propagate their race. We will find auxiliaries in them the more valuable, as they increase with our adversaries; and as they alone are able to rival the cunning of these ingenuous enemies."

Medical Quackery.

A child has recently been killed in Philadelphia by the ignorance of an incompetent practitioner of medicine, who in giving a prescription for castor oil (*oleum rieini*) did not know how to spell the medical name, and wrote it *ol. resini*. From the indistinctness of ordinary writing, *e* may be taken for an *o*, and *in* for *m*, so that the boy who gave the medicine naturally read *ol. rosm.* as an abbreviation of *oleum rosmarinii* (oil of rosemary,) there being no drug known as *ol. resini* (or *resinæ*) the oil (or spirits) of turpentine being known under the name of *ol. terebinthinae*. Nevertheless, as the *doctor's* ignorance was sufficient to induce him to write *ol. resini* had he wanted oil of turpentine, the druggist had to choose between the two medicines to which the prescription came nearest but neither of which was intended, and the result has been that the boy who prepared the mixture was improperly discharged for following a prescription, instead of the *doctor* being indicted for homicide or manslaughter, his practice under the circumstances being *unlawful*.

The *doctor* in his testimony made use of a supposed word *comatous*, probably meaning the common medical term *comatosæ*, which is another example of the kind of medical education he has received, if he ever received any—and if he has, it is due to the reputation of the *respectable* medical schools, that they clear themselves of the stigma of having graduated him. The *doctor* states that he has spelt "*resini*" for thirty years, and we are curious to know what he supposed

was in the bottle marked OL. RICINI in the drug stores; and in that marked *ol. chenopodii* (worm-seed oil,) as he wrote the latter in English.

We caution our readers not to employ irregular practitioners, nor such as have graduated in schools of questionable standing, nor to purchase advertised pills, tonics, syrups, sarsaparilla, cherry peptorals (like that of Ayer, which is backed by a forged certificate of Professor Silliman) and mixtures made to practice chiefly upon the supposed credulity of the country population. Let them avoid in particular, any secret medicine with accounts of wonderful cures, especially when certified by venal clergymen, who not only prostitute their sacred calling, but have the audacity to name the church where they officiate, in defiance of the decent portion of their congregations. Clergymen who place D.D. after their name, are especial favorites with the compounders of secret medicines, and are probably worth fifty dollars a piece more than the ordinary kind, in the certificate market.

Clerical certifiers have seen their best days, and some quacks as the cure-lying Roback, will not condescend to use them, his best friend probably being the mayor, who may find him a useful medium between thieves and the police, in the recovery of stolen goods.

Some suppose that medical names should be written in English, which is an absurdity, not one-tenth of them having English terms, as in natural history, where *half a dozen* weevils may have them, among *eight thousand* without them. English names in either case would add to the confusion, and it would be wrong to ask the unstructured physician and pharmaceutist to lower themselves to the level of quacks and homicides, and *below* that of school boys and girls, who, in studying botany, are not satisfied unless they know the *botanical name* of a plant, which is always in *Latin*. Such dictation would compel physicians to compound their own medicines, as they are compelled to do in country practice.

The advocates of "English names to let people know what they are taking," are inconsistent in being satisfied that any amount of advertised medicines should be swallowed, the composition of which is neither known nor ascertainable—and which may vary from month to month.

THREE-CENT PIECES.—As the word *five* is the basis of one of the names of a small coin, *farthing*, *three* may suggest that of *thrip*.

AT Genoa, it is said, every attorney takes an oath to undertake no cause which he does not consider just; and at Rome there is a society which affords legal aid to the poor, free of cost.

THE most degraded Celt is infinitely less of the brute than his Saxon cotemporary.

Root out sourdocks before the seed ripens.

Cicada septendecim.

For the purpose of ascertaining the length of time that this insect lives after the period of depositing its eggs, we took four pair on the 11th of June, which were attached together. These we kept in a vessel in the house without food except a bit of the branch of an apple tree, which soon withered. On the 13th, one pair being nearly dead, was rejected, and one pair was placed upon a small birch tree, and the other two pair upon a low branch of an apple tree. In each case a glass jar covered with gauze was suspended over the insects and branch, so that they could be kept safe and readily observed.

Of the pair upon birch, the male soon commenced inserting its *haustellum* or snout into the bark for the purpose of sucking the sap. The female did not commence making perforations and depositing her eggs until the afternoon of the 15th, and she seems to have oviposited but once. She and her mate are still living on the 18th.

Of the three pair placed on the apple branch on the morning of the 13th, one female oviated on the afternoon of the same day.

14th. Morning—Two males and one female have died. More eggs deposited in the afternoon by both of the two surviving females.

15th. Morning—One of the two females is ovipositing.

16th. Both females are ovipositing forenoon and afternoon.

17th. One of these dies in the afternoon, and upon being opened, is found to contain a number of undeposited eggs.

18th. The remaining female is still living.

In forming a perforation for her eggs, the female stands lengthways upon the branch (her head being either towards or from the tree) when she raises her body and brings her ovipositor or boring organ vertically upon the branch, and although it sometimes slips aside, she finally fixes it by pressing the point of the middle or gouge-shaped portion on the bark, where she moves it up and down about twice in a second, supported by the two side pieces, which are kept quiet upon the surface and follow it afterwards as rapidly as the size of the hole admits. In two minutes the point has entered, when she lowers her body, which gives the instrument a slanting direction backwards and downwards, and permits her to use it as a lever to raise the fibres. She proceeds along the branch boring and depositing at the rate of about an inch an hour. It requires about fifteen minutes from the time of commencing a perforation until the ovipositor is inserted at its base in the wood. The eggs are pearly white, tapering towards both ends, and about a twelfth of an inch long and one-seventieth in diameter. According to Dr. N. Potter, of Baltimore, the eggs hatch in *fifty-two* days.

A few individuals of this insect appear every year,

and it is probable that the time must arrive when they will be annual like the ordinary species. Some have supposed that they may occasionally retard or anticipate their usual period by a year or two, but there is no evidence of such being the case, early and late individuals being probably descended from others which were equally out of the range of the regular appearance.

The sting of this insect seems to be dangerous, but there is no account of the organ with which the puncture is made. This is probably the ovipositor of the female, as the *haustellum* (which inflicts a poisonous wound in some insects belonging to the same order) is hardly strong enough to the pierce the skin.

Building Material.

An effort is making in Washington to have the public buildings hereafter constructed of the inferior sandstone used in the Capitol and Patent office, rather than of the more durable and ornamental marble, but it is to be hoped that there is sufficient science in Washington to prevent such a result. Some sandstones are good and durable, and that used for the Smithsonian building seems to be of an excellent quality, although rather dark in color.

Cast iron is coming into use as a building material, but some imagine that it is necessary to paint it *black* to resemble the natural shade of iron, but iron is not black, but grey when freshly broken, and some shade of brown or ochre externally, so that black is not suggestive of the material. Moreover, as it is not customary to paint wooden columns so as to indicate whether they are of pine or oak, there is no necessity of making this indication with iron. Much black is too conspicuous among light colors to make a pleasant impression, and on this account it should be avoided.

To Correspondents.

J. S. KELLER.—Two insects which resemble each other pretty closely, destroy garden vegetables. Of

one of these we have a cut, which we give here, and the other (*Galeruca vittata*) will be figured hereafter. In the mean time, a single figure, with some explanations, will serve for the identification of both.

CRIOCERIS TRILINEATA. The *crioceris* is about half the size of the figure, or a fourth of an inch long, of a brownish yellow, with two black dots upon the prothorax or part following the head, and three black lines along the elytra as represented in the cut. This species is common upon potato vines, and Dr. Harris (*Injurious Insects*, p. 96,) recommends them to be brushed into shallow vessels of salt and water, or vinegar.

The insects sent by our correspondent came crushed. They are the *Galeruca vittata*, which is one-fifth of an inch long, pale yellow above, with the head and



three stripes along the elytra black, the under parts being mostly black. Dr. Harris (p. 101) has brought together various remedies, as charcoal dust or scotch snuff sprinkled when the plants are wet with dew, an infusion of tobacco or red pepper mixed, of elder or walnut leaves, hops—a solution of an ounce of Glauuber salts in a quart of water. "As these insects fly by night as well as by day, and are attracted by lights, lighted splinters of pine knots, or of staves of tar-barrels, stuck in the ground during the night, around the plants, have been found useful in destroying these beetles. The most effectual preservative against these insects, and the equally destructive black flea-beetles which infest the vines in the spring, consists in covering the young vines with millinet stretched over small wooden frames."



HALTICA

RIOLATA.

The flea-beetles here alluded to are minute Coleoptera of the genus *Haltica*, of various species. They are often termed cucumber fleas on account of their small size and leaping powers. We give an enlarged figure of one species as an example.

Mr. Levi Bartlett describes his millinet frames as follows in the *N. England Farmer*, vol. 2, p. 305, copied in Fessenden's *American Farmer*, p. 91. "Take strip of pine board (about three-fourths of an inch thickness is most suitable) eight or ten feet in length, and four or five inches in width—plow one edge of it with a carpenter's plow or match plain—then work off an equal number of side and end pieces; before sawing the side pieces run a bradawl through where you want to drive your nails, as it is not so likely to split as after it is sawed. The side pieces eleven inches long—the end pieces eight inches long. They must be of this particular size, because one yard of millinet will just cover nine boxes; or a third of a yard will make three covers. After having nailed your boxes and divided your millinet, have some strips or tongues, as the carpenters call them. Press these with the edges of the covers into the grooves, which fastens them much cheaper and more expeditiously than small nails. I made about twenty last season, and they effectually secured them from the yellow bug, and (by sinking the edges of them in the earth a little) from worms. But if they were of no use but to guard against insects, they would be worth having, as they keep off the cold winds, and greatly promote the growth of the vines in the early part of the season."

LARD CANDLES.—A correspondent of the Michigan Farmer, gives the following method of making candles of hog's lard, which he says prove of the best quality. Put all the lard, say enough for 5 lbs. of candles, in the smelter; after it attains a heat of about 200 Fahr. throw in 3 or 4 ounces of lime, and about an ounce of aquafortis, and then mould them. The lime purifies the grease and the aquafortis hardens it.

State Agricultural Fair.

The following circular addressed to the people of Pennsylvania, by Hon. Frederick Watts, President of the State Agricultural Society, is a forcible appeal, and one to which we ask the careful attention of our readers. It should be remembered by every farmer in Pennsylvania, that this, the first exhibition ever held under the auspices of the State, is looked forward to with great interest by the friends of agriculture elsewhere. Active preparations are going on in other States to provide articles for exhibition.—Will our own people stand back and be mere spectators, or will they, with true State pride, put forth a strong and vigorous effort in behalf of the exhibition? We hope and believe they will, and we confidently look forward to such a display as will reflect credit upon the State.

TO THE PEOPLE OF PENNSYLVANIA:

It will not be forgotten that the State Agricultural Society of Pennsylvania has fixed Harrisburg as the place, and the 23d, 24th and 25th of October next as the time for their ANNUAL EXHIBITION. There is no State in the Union whose climate, soil and the habits of whose people afford more ample resources than our own for a creditable exhibition of their skill and industry. There is nothing raised, grown or manufactured upon the face of the earth, which is not more or less interesting in the study and science of Agriculture. The farmer, the horticulturist, the inventor, the mechanic, are all cordially and earnestly invited to contribute and partake in the interest which will be excited by the occasion; and especially do we invite the aid, countenance and presence of our mothers and daughters, upon whose handy-work and good example we are so dependent for all the domestic comforts of life.

Arrangements are now being made for enclosing the grounds, and providing separate and safe places for all articles which shall be presented for exhibition. All the canals and railways of the State will be open free of charge for their transportation to Harrisburg, and visitors will come and go on them at one half the usual rates.

The young men of the State are reminded that the PLOUGHING MATCH will afford them an opportunity for the display of their skill, the training of their teams and the fitness of their instruments.

While we address this communication to the people of our State, it will not be understood that it is designed to exclude the citizens of other States; much less to avoid the honorable competition which their contributions may afford. Now is the time to prepare. By direction of the Executive Committee.

FREDERICK WATTS,

President of the State Agricultural Society.
Carlisle, May 28, 1851.

THE disease which has so seriously affected the orange groves of Florida, for several years past, is passing away, and orange growers are again turning their attention to this profitable cultivation.

THERE are about one hundred and seventy mills in Lancaster county, and wheat enough raised to keep them all busy.

Communications.

The Potato.

MR. EDITOR:—This plant is a native of Chili, South America, and was first described by Clausius, a German botanist, of which there is a plate among his rare plants. Sir Walter Raleigh found the Indians cultivating it in Virginia, and he carried some of the tubers home to England on his return from America in 1586. How it got from South America to Virginia is not satisfactorily known. It is still found growing wild in its native localities, but the tubers are said to be small, and to possess an insipid taste. The Indians called them *taratoufis*, in Virginia they were called *openawk*. The Spaniards called them *Butatas*. The Spanish name now is *Batatins*; the German *Die Kautöffel*; and French *Pomme de terre*.

It belongs to the *fifth* class and *first* order in the artificial system of Linnæus, and to order *Solanaceæ* in the Natural System of Adamson. It was described under four different names. *Solanum tuberosum*, by Linnæus; *Solanum esculentum*, by Neckar; *Solanum parmenterii*, by Molina; and *Lycopersicum tuberosum* by P. Miller. The meaning of *Solanum* is uncertain, but it is an ancient name and there are about five hundred well defined species of this genera described. The potato is evidently a *Solanum*, as well as the white and purple egg plants, the former of which is called *Solanum melongena*, and the latter *Solanum esculentum*. The specific name of Linnæus is universally adopted, and means tuberous *Solanum*. The varieties of this species are very numerous, above two hundred have been described, and new ones are constantly being introduced, which is done by planting seeds chosen from the ripe potato apples. The surest and best way to proceed is to squeeze out the seeds and preserve them until the following spring in dry sand. In March plant the seeds in a hot bed or in a box in the house, and after the frosts are over the seedling plants should be raised with as much dirt around them as possible, and planted out in rich and well pulverized ground, in rows about eighteen inches apart, and the plants set about six inches asunder. The ground should then be kept loose around them and free from weeds: when ripe, the roots should be cautiously kept from the frost. The next season the roots should be planted out in the common soil of the farm, and if properly attended to they will arrive at their full size and perfection.

The potato has many enemies, and from time to time has been violently assailed with disease and threatened with extermination.

In 1776, in the principality of Geottingen, a disease called the *curl* made its appearance on the stem and leaves of this plant; in 1779 it appeared in Hanover; in 1780 in the British Isles; in 1792 it threatened to exterminate potatoes in England; and in 1800 it presented the same disposition in Prussia. Some as-

signed the cause to an insect called *Phytocoris*, but others attributed it to over ripe tubers. The remedy was found to be, to change the seed for that from higher latitudes.

In 1780, a disease called the *rust*, attacked the potato, similar to the rust in wheat. It raged in Germany with great severity; and at different times and places the rusts, mildews, &c., have frequently destroyed the crops of this vegetable. They are attributed to the attacks of several species of *fungus* among which are several species of *Botrytis*, *Uredo tuberosum*, *Fusiporium solanii* and *Fusiporium sporotrichoides*. The *Protomyces solanii* often attacks the potato in cellars, and badly ventilated places.—Plaster, lime, sulphur, salt and ashes, are beneficial applications in these diseases: fermenting and slowly decomposing vegetable matters appear to be the principal cause of these diseases.

In 1782, a disease called the *scab* made its appearance in Europe and prevailed to a considerable extent. A dry sandy soil, and high cultivation, seemed to be the best preventative.

In 1769, a disease called the *rot*, and nearly allied to the disease now prevailing, made its appearance in Germany; in 1783 in Prussia; in 1830 in France; in 1834 in Great Britain, where it threatened the total destruction of the potato crop; in 1839 in Russia; and in 1840 in Bohemia. Some assigned the cause of this disease to the habit of cutting the seed into thin slices, others however assign it to the attacks of a fungi or peculiar species of mushroom. A healthy condition of the soil, and strong sound plants were the best preventatives.

In 1829, a disease called the *blue rot* or *blue tumor*, made its appearance in Germany, and spread through Saxony and the Upper Hartz. “Blue spots and risings are first observed on the skin of the tubers, afterwards a dark colored texture similar to a rhizompha appears, which surrounds the tuber, penetrating even its interior, followed by blue spots and streaks in the heart of its substance.” A mixture of saw dust and dung, it is said, was the cause of it.

In 1840, an insect called the *Phytocoris lineolaris* attacked the potato in some of the New England States, and about the same time the *Aphis vastator* in Europe, but they did not produce much mischief.

In 1843, the existing *murrain* or *potato rot* made its appearance in Prussia and in the United States; in 1844 in the south of Europe; and in 1845 it spread over nearly all the middle and north of Europe, totally destroying the whole crop in many places, and leaving famine behind it. It has spread more generally and been more destructive than any other disease that has assailed this important vegetable. Nor does it seem to be confined to the potato alone; in some districts tulips, hyacinths, carrots, onions, tomatoes, and in Jamaica, the yams and coocoas have suffered from the same or a similar disease.

The cause is yet a mystery. It appears like a reg-

etable cholera, and moves with singular rapidity and precision. This vegetable cholera is, no doubt, the result of a vegetable parasite, similar to the *entophoza* that attacks the mucous membrane of animals. It appears that dry gravelly soils are the best suited to avoid the attacks of the disease. Putresecent manures should be avoided, and a free use of charcoal, salt and lime, are among the best preventatives. Plant early and dig the potatoes before the ground gets wet and cold in the fall; then pack them away in charcoal, and you will probably escape the rot. I saw a large amount of potatoes opened this spring that had been packed away in "coal breys," at one of our furnaces, and they were generally sound, while some that had been stowed away in the usual manner entirely perished. I would suggest this plan: *Lay down a layer of potatoes, slightly cover with fine charcoal, then another layer of potatoes and charcoal, and thus form a heap, which cover in the usual way.*

We have reason to believe that in a few years the disease will disappear, and we will be again permitted to enjoy the use of this favorite esculent.

J. M. McMILLIN.

Unionville, Centre co., Pa., June, 1851.

Remedy for a Cow who sucks herself.

MR. EDITOR:—Hearing recently an effectual cure for this inveterate habit, and at the same time a very simple one, which has been tried in this vicinity and found to answer completely, I send it for insertion in the Farm Journal.

Draw the cow up by a halter to a fence corner, or stall in the stable, and insert in the same manner as a ring is put into a bull's nose, a round stick through the cartilage which divides the nostril, (and which is quickly done by a single blow with a mallet,) say about six inches long, and let it remain. It will occasion no inconvenience to the cow, and whenever she attempts to suck herself, it will cause such a strain on the nose as to make her desist instantly.—The proper length for the stick to extend each side of the nose, can better be told upon trial, as it may be lengthened or shortened, as may be found necessary. To make it still more effectual it might be pointed at each end.

The habit of sucking herself in the cow, is one almost impossible to break by any contrivance of yokes or muzzles, and it is not dissimilar to intemperance in the human subject. Total abstinence being the only safety, a taste being once had, self-control is gone. I once had a valuable heifer, (I raised from the celebrated McElroy cow,) who made 16 lbs. of butter in a week, and which I was obliged almost to give away on account of this habit. She promised to be equal to her dam in butter qualities, and many expedients were tried to break her, but ineffectually. A stiff muzzle was put on her, well supplied with sharp spikes. Her udder, so violent was her fond-

ness for her own milk, would often be scored with deep cuts, and drops of blood, but she would still get it. A stiff yoke on the neck was also tried, which looked as if it would entirely prevent her turning her head round. This also hurt her keep and was ineffectual.

Had this cow been cured of this habit, she would now have been worth \$100. Her mother was a most remarkable animal for deep milking, and her former owner, before I purchased her, was said to have sent to market from her, 17 lbs. of butter per week. She made with me nearly 15 lbs. of butter a week, on grass alone. Edge Cope, residing about two miles from this place, and whose statement can be entirely relied upon, now owns a heifer from her, who made last season, when she was on trial and milked three times a day, 17 lbs. of butter in a week. The milk was weighed each time, instead of being measured, and reached about 75 lbs. per day. He weighed it himself to avoid mistakes.

The simple recipe here given, and also one by James Gowen in the first number of the Farm Journal, of the hay rope in cases of hoven, (and which I also tried and thereby saved the life of a durham bull which cost me \$550,) are strong illustrations of the value of agricultural journals, and are worth the price of many years' subscription.

PASCHALL MORRIS.

West Chester, June 20, 1851.

The Education of Farmers' Daughters.

MR. EDITOR:—As I cannot think the Farm Journal designed to lay before its readers such matters only as relate to plowing, planting, mowing, reaping, &c., and the education of *farmers' sons*, I ask a place in your columns for a few remarks on a subject interesting alike to all—the education of farmers' daughters.

Much has been said and written on the subject of education. The merits of colleges, academies and agricultural schools have been thoroughly discussed. But these all refer to the boys, while the girls are wholly uncared for, as though the cultivation of their intellects was a matter of trifling importance. The general impression appears to be, that they would make just as good wives and daughters with no more education than enabled them to read their Bible and almanac, as if their intellectual training were such as every farmer's daughter should be. Does not the mother exert a controlling influence over her child; and do not her teachings and example, in nine cases out of ten, mould its future character? Many of the greatest and best men who have ever lived, attribute their virtues and greatness to the tender counsels of their mothers. Who among us, does not owe much that is commendable in our characters to the same source? How frequently do we hear the folly

and wickedness of individuals attributed to the ignorance of their mothers?

If, then, so much depends upon the kind of teachings a mother is capable of imparting to her children, how important does the education of the farmers' daughters become, and with what solicitude should parents endeavor to prepare them for the highly responsible stations of wife and mother, which they may be called to fill?

Although my remarks will apply with equal force to all classes of society, my object is, to draw the special attention of the farmers to this subject, because I think it has been less seriously considered by them than it deserves to be. Now-a-days, almost every farmer possessed of the means, appears desirous of giving his sons a liberal education. This is highly commendable; but at the same time it should not be forgotten that his daughters have an equal claim upon his regard. It is, with me, a question, which of the two—the education of the son or the daughter—is the most important. But leaving this question for the present, it is enough for us to know, that the prosperity and happiness of the individual, the family and the nation, demand that where it is practicable, the blessings of education should be extended to all.

Almost every farmer who has given his sons a liberal education is convinced of its utility. If education is beneficial to the son, why not to the daughter? Are her duties any less important than his?—Has she not the moulding of the character of future generations? Should not the mother be competent to instruct her offspring in many of those branches of education in which her gentle care and affection make her the most fitting instructor? None but those who have never known the inestimable value of a kind mother's teachings will dissent from this.

But my remarks are growing too lengthy; I shall therefore conclude them for the present, promising to renew the subject in future numbers of your valuable Journal, should you deem them of sufficient importance to present to your readers. Yours,

June 20, 1851.

Plow Boy.

NEW WATER CEMENT.—It is said that a very strong and valuable water cement has been made by Gen. Pasley, of the British army, consisting merely of four parts by weight of chalk and five of blue clay. According to the experiments made to prove its strength, it must possess extraordinary tenacity.

To keep preserves, apply the white of an egg with a suitable brush to a single thickness of white tissue paper, with which cover over the jars, overlapping the edges an inch or two. No tying is required.—The whole will become, when dry, as tight as a drum.

Good Advice.—Do not begin farming by building an expensive house, nor erecting a spacious barn, till you have something to store in it.

The Berkshire Agricultural Society.

MR. EDITOR:—Whoever had occasion to travel north from Lenox, forty-five years ago, found himself on a highway, twice the width of ours, pursuing a straight line without regard to hills, and upon attaining an unusual elevation within a few miles of Pittsfield, the village in full sight, he might observe below him, at the right, a mansion-house of some pretension, in good architectural taste, in the midst of pleasant grounds. Outspreading around it were well cultivated fields, and a little distance in the rear, one of those beautiful sheets of water, three to six miles in circumference, which abound in that region, and from which the Housatonic takes its rise. It was a choice spot which had been early selected by one of the wealthy adjoining Knickerbockers; still retaining the name of the Van Schack place, and if we mistake not, then occupied by one of that family.

It soon after passed into the hands of Elkanah Watson, who may be justly styled the father of agricultural societies among our farmers. Pittsfield, where the society was formed, which has since been honored by the title of "Parent Society," was the residence of men distinguished in their day and generation. Among these were "Parson Allen," familiarly so called, of Bennington battle memories; a *chaplain*, famous alike in the desk and in the *field*—Dr. Timothy Childs, eminent as a physician and politician, and the father of some who have since attained to like eminence in the varied walks of life—Col. Simon Lane, high sheriff of the county for many a long year, the same who afterwards commanded the "bloody ninth," so greatly distinguished at Lundy's Lane, and whose son it was that every one admired as a pulpit orator—Col. Joshua Danforth, postmaster of Pittsfield, the father of an eminent preacher, known to us all—Chandler Williams, Thomas Gold and John W. Hulbert, men of marked character and great distinction at the bar, and as citizens. Mr. Williams, a man of wealth and refined tastes, cultivated his gardens and grounds to the delight of every beholder—John W. Hulbert was an orator and a wit—prompt at reply, ready in debate, and of never-failing moral courage, he attained to celebrity in Congress among the greatest men of the day—Thomas Gold occupied the most beautiful situation in the most beautiful town of the valley of the Housatonic, and amidst the cares of his profession, gave great attention to agriculture and the adornment of his grounds. His surrounding fields present themselves at this moment, to our early memories, as the perfection of landscape gardening. We may add, that it was there that one of the doers of good in our own day, Nathan Appleton of Boston, found an accomplished wife, and advert to Mr. Gold more emphatically, because, when thirty years ago, the writer found himself in Chester County, surrounded by intelligent farmers, and enjoying a portion of their confidence, the first idea of

a practical Agricultural Society among the tillers of the soil, in *this State*, was started. Dr. Darlington and Charles Miner took a leading, active part, in promoting its establishment, and Thomas Gold being the President of the Berkshire Association for the same object, he wrote to him to send us an account of their doings, with such hints as might occur to him. Enclosed is a copy of his reply, which as it contains a little history of "*the first Society in the world, which adopted a practical course, &c.*" you may think it worth presenting to your readers now.

A FRIEND TO AGRICULTURE.

MR. MINER: In answer to a request made at your instance, on behalf of the proposed Agricultural Society in this county, the enclosed communications have been received from Thomas Gold, Esq., of Pittsfield, Mass., one of the original promotoris and sometime President of the Berkshire Society. You will no doubt think those passages of the letter which have been marked, well worthy of publication, and calculated to promote the object of a similar association in this county. The writer is certainly entitled to our best thanks, for the interest he has expressed in our success, and for the pains which he has taken to communicate his views.

The Ode breathes the pure spirit of poetry, and will no doubt grace a corner of your next Parterre.

Let the other papers, consisting of the By-Laws of the Berkshire Society, Mr. Gold's Addresses in 1817, and 1818, proposals of premiums, &c., remain in your office for the perusal of those who are interested in the establishment of such a Society here.

Is it not possible to raise twice the quantity of produce annually in Chester county, to what is now raised, and will not an Agricultural Society tend to effect this object? Who that compares our present products with what they were twenty years ago, and recollects that they are still one hundred per cent. less than what is produced in many parts of Great Britain, will despair of improvement? "The man who causes two blades of grass to grow where there was but one before, renders more service to mankind than all the statesmen and warriors that arise in a century."

CIVIS.

"I avail myself of the first leisure to comply with your request, viz: to forward a copy of the Constitution of the Berkshire Association, with such information as I may deem useful. I now enclose you a copy of our by-laws, which [is] the foundation of our proceedings. The Society was incorporated in 1811. The act contains only a general grant of all powers requisite to establish and carry on the Society. The by-laws contain the rules by which the powers granted are to be executed. These laws are subject to annual improvement, as experience and circumstances may require—accordingly we have made some small amendments."

"Your Society, no doubt, will conform its regulations to its circumstances. It will be well, however, to avoid multiplicity of regulations, and to render them plain, explicit, and easy of execution.

"It will always be important to success, that you appoint men of good standing, of considerable means, of competent learning, much given to enquiry, reading and experiments. This will be all important at the out set—and they should be ready and alert in the discharge of every duty. Much must be written

and dispersed among the members. There must be used, means of extensive excitement. The business must be impressed, as primary the foundation of all other pursuits, agriculturists must be taught to respect themselves and their employments. They are the real nobility of our republican country. At your meetings, and especially the anniversary, much must be done to explain and enforce the objects of the society—to prescribe the means and the measures, and to convince them of the utility of the results—in fact it should be a great occasion of excitement—we occupy two days industriously.

"The most important means of prosperity in these associations are adequate funds. In the early stages of our society, we relied on subscriptions and private contributions—these were precarious. Three years ago our legislature voted us \$200 a year for three years; and a few months ago, they adopted a permanent system for the encouragement and support of such societies, by which each society may receive \$600 yearly: provided the society or others, will place out on a permanent footing, a sum that will also produce \$600 a year, or any less sum. The plan was for the state to furnish a moiety of the funds, and the society the other moiety. We have executed the act by obtaining good notes of say \$50 each, from responsible men, bearing an interest of six per cent. payable yearly, which constitutes our permanent fund; and so much as this produces, the state allows an equal sum. This arrangement has placed us on a foundation that will enable us to adopt some additional measures, promotive of our usefulness.

"This society, as you remark, has attained too much distinction in our country. It was the first society in the world, which adopted a practical course for exciting and bringing into action the physical means and energies of the country and population. The plan was original, novel; and at first was doubted. Time has removed all doubt, and the good sense of our country has sanctioned the great experiment. The success and extensive usefulness of this Institution is acknowledged throughout our country, and we have many who regard us with cordial good will. The Massachusetts society, though general and of long standing, never were able to extend themselves beyond theories: they therefore honored us with the appellation of "Parent Society." During the period I was at the head of the society, we furnished plans and instructions for numerous associations not only in New England, but New York, Connecticut, North and South Carolina and Virginia. We presume, however, that the good sense of these sections of country have made many, and valuable improvements; the only merit we have is that our plan is practical and has succeeded beyond human expectation. We infer from these incidents that it is wisely suited to the present condition of the community; the events that time continually gives birth to, confirm our impression of the utility, and the necessity of the associations. The peculiar situation of the civilized world, teaches us that we must rely on ourselves; our resources are equal to every purpose. If our government will do their duty effectually we shall not long remain embarrassed. The efforts made to influence Congress are great; they deserve all possible success; they must succeed in a considerable degree."

AN evidence of the progress of Agriculture, as a profession, is the fact that in almost every county in this State there is an Agricultural Society.

Farmers' Clubs.

MR. EDITOR:—Supposing the idea of establishing Farmers' Clubs in the townships to be approved, some difficulty may occasionally be felt, at the outset, from inexperience in organizing associations. It may be said, "Yes; this might do, if we only had a fair start; but how are we to begin?" Allow me, if no better plan be devised, to suggest the following, viz: There being two or three farmers together, and talking over this matter, let them agree to meet on the next Saturday, at 2 o'clock, at some appointed place, and each, in the mean time, invite as many of his neighboring farmers as he may see to join them at the meeting, in order to form a club. Such a meeting, at the time and place, being assembled, some one may be chosen as chairman who shall call the meeting to order; then a secretary, and next a committee may be appointed, the latter to report rules for forming and regulating a farmers' club.

To assist in that operation, I would further suggest the following form, that is to say:

ARTICLES OF THE FARMERS' CLUB OF —— TOWNSHIP.

1. The Name of this association, shall be, "The Farmers' Club of ——," and its object, the mutual improvement of its members in the business of Agriculture.

2. The officers shall be a President, Secretary, and Treasurer.

The President shall preside at the meetings of the Club, regulate discussions and debates, put the questions to vote, and announce the decisions.

The Secretary shall keep memorandums of the proceedings, file and keep all papers intended to be preserved, and take care of all books and other things belonging to the club.

The Treasurer shall receive the contributions of the members, pay out, on the order of the President, and keep an account of the receipts and disbursements for the inspection of the club.

The same person may be elected Secretary and Treasurer.

There shall be an annual election of the officers.

3. As soon as these articles are adopted, the Club shall proceed to elect by a majority of votes, a President, Secretary, and Treasurer, to serve one year and until their successors are chosen.

4. These officers shall prepare and report at the next meeting By-Laws, which when approved by the Club, shall govern the same until altered or repealed.

5. The By-Laws shall prescribe the time and place of meeting, the terms of admission of new members, the time and mode of electing the officers, regulations for conducting the proceedings of the club, and other matters conducive to its prosperity.

They may be amended or changed on such conditions, as the Club may determine.

With respect to the advantages of such associations, I will add, that they would diffuse a knowledge of the best and most successful modes of farming, reform slovenly and wasteful practice, and increase the profits of agricultural industry. We imitate what we see others do in our line, if we find that it is better and more profitable, than we have been accustomed to do ourselves; for all men seek their own advantage, by the law which obliges all to pursue their happiness. It is want of true knowledge alone, that causes so much error in this pursuit. But no means of knowledge are more positive and sure, than an interchange of useful ideas, and the communication of authentic facts in the actual business of life. This advantage would necessarily result from the meetings of the club. The best farmer in the neighborhood would be a pattern for all the rest, who would gradually and speedily rise towards his level. For whatever variety of grain he uses, or improved farming implements, manures, or methods of cultivation, his superior success would recommend to their ready adoption. It would only be necessary, that they should be known and explained. This is the natural and rational effect of example: no theoretical argument is so influential.

But the benefit would not be confined to the mere following of a good example. The statement of the facts, would lead to conjectures, reasonings, discussions, and the formation of judgments. A farmer speaking of the work of an improved plow, or drill machine, or any new method of planting, or application of a manure to his soil, would naturally state how, in his opinion, the effects were produced, tracing them to their particular causes; others, upon the same facts, might suppose the result could be differently accounted for, and in the comparison of ideas, it would soon be discovered how much the progress and improvement of agriculture depend upon the activity of the intellect and mental training. As the desire of knowledge is increased by its acquisition, the meetings of the clubs would greatly promote both. They would bring to the notice and consideration of the members a large amount of useful practical facts, and habituating them to reason upon those facts as well as apply them to their business, would lead them to make new applications and improvements, and thus assist in the progress and onward march of agriculture.

Nor is it to be supposed, that when a club should become possessed of all the positive knowledge of the township in regard to the business of farming, it would remain satisfied with that advantage. Nothing would be more natural, than the disposition to look further, and inquire after the improvements of neighboring townships; and as opportunities are, every year, in our free and active communities, afforded to all persons, of frequently meeting their fellow citizens of different sections of the county, such inquiries would be extended to all its borders. The love of

knowledge "growing by what it feeds on," would thus impel our clubs to a species of self-education by inducing the members to observe, inquire, and think; and the inestimable aid of agricultural journals and treatises, would be eagerly sought and employed.

They would begin to see how much they had lost by neglecting hitherto the means of improvement now laid before them in the pages of those works; and their regret would not be fruitless. The long winter evenings at home, would be most profitably spent in examining and studying their contents; and the conclusion would be readily attained, that it is now their duty to do that for their sons, which they cannot but wish had been done for themselves. Reflecting how much they might be now advanced, by having been well educated at their start in life, they will clearly perceive that it would be better to give those who are to succeed them, a good education even with something less of property, to begin with, than leave them to struggle with the world, purblind and destitute of the labor-saving helps of science.

One of the most cheering results of the proposed clubs, would therefore be, to make our agriculturists efficient patrons of liberal education. The time is coming when the highest course of instruction will not be considered as useful and proper, exclusively, to what has hitherto been termed the learned professions, but will be as manifestly advantageous to other callings, and especially to the honorable vocation of a cultivator of the soil. Our young men will then, upon the completion of their academical or collegiate course, return to their homes with the intention of engaging in whatever pursuit may appear to afford them the best prospect of success in life, conscious that they have qualified themselves to reach its loftiest attainments, and that real honor consists not so much in the fact of a man's being of this or that profession, as in the superior excellence which he can achieve in the business or calling he may have adopted.

But what avocation can be more intrinsically honorable, than that which is concerned in subduing the earth to the uses of men, in reclaiming the wilderness, and substituting the life-sustaining harvests and golden fruits of fields and orchards for our primeval forests and wide extended prairies, and in renovating the worn out soils of our earlier settlements? When the pen of history shall be guided by the hand of truth, more real glory will be ascribed to this country for her generous sympathy in supplying abundantly, as she did in 1847 from the exuberant products of her agriculture, food to the famishing millions of Europe, than for all the splendid triumphs of her arms on the plains of Mexico and the acquisition of the "golden sands" of California. The time is at hand, when the opinion of the English sage will no longer be deemed extravagant, "That whoever could make two ears of corn or two blades of grass grow upon a spot of ground, where only one grew before, would deserve

better of mankind and do more essential service to his country, than the whole race of politicians put together."

A. L. II.

Lancaster, June 9, 1851.

On the Cucumber Bug;

in a letter addressed to the *Editor*, by J. S. Keller, of Orwigsburg, Pa.

Enclosed I send you two bugs, a male and female, with provision to keep them alive till they arrive in your office. This insect is of vast injury to the farmers, especially to those who are engaged in raising watermelons and cucumbers. It attacks the tender plants as soon as they are out of the ground, and continues on for several weeks. When approached in a warm day, it flies away, if not taken and killed immediately. In cool weather it drops off when the plant is touched, and remains motionless for a short time, or hides among the little clods. I had almost all my watermelons and early cucumbers eaten by this hungry insect. I tried lime dust, ashes, black pepper, plaster, flour of sulphur, and chicken dung, (the latter having heretofore been considered a good remedy,) and all availed nothing. I killed thousands with my hand, and that is the only remedy I found to stop their ravages. Where this bug deposits its eggs I am not able to say.

Any person discovering a remedy either to destroy or prevent this insect from eating the plants, is deserving of a premium of no ordinary nature, and Mr. Harlacher, (vegetable farmer at Hamburg, Berks co.) offers a premium of fifty dollars to any person discovering an effective remedy against them.

The Schuylkill County Agricultural Society will meet on the 28th of June to organise finally, and adopt By-Laws.

June 9th, 1851.

THE WAY TO BE HAPPY.—Some think it a hardship to work for their bread, although for our good it was meant; but those who don't work have no right to be fed, and the idle are never content. An honest employment brings pleasure and gain, and makes us our troubles forget; for those who work hard have no time to complain, and 'tis better to labor than fret. And if we had riches, they could not procure, a happy and peaceful mind; rich people have trouble as well as the poor, although of a different kind. It signifies not what our stations have been, nor whether we're little or great; for happiness lies in the temper within, and not in the outward estate. We only need labor as well as we can for all that our bodies may need, still doing our duty to God and to man, and we shall be happy indeed.—*Selected.*

TRUE.—A Western writer thinks that if the proper way to spell *tho* is "though," *ate* "eight," and *beau*, "bean," the proper way to spell "potatoes" is *pough-teaoux*.

Mr. Russel's Project of an Agricultural College.

MR. EDITOR: I have read with pleasure the articles in the Journal, upon the subject of Agricultural Schools and Education, written by Dr. Elwyn, Mr. Gowen, and Mr. Garber.

The able report of the Superintendent of Common Schools, has awakened an interest to the subject throughout the Commonwealth, which though it may have been felt by individuals, did not before reach the public eye, the public ear, the public heart.

I have not failed myself, on every suitable occasion, to express the deep obligations of the Agricultural community to Mr. Russel, for the noble and disinterested service he has rendered them. His project evidences talent, extensive research, and close thought—it does credit to his head and his heart. It furnishes to all disposed to invite or declaim upon the subject a text, that will be used until Pennsylvania shall boast of its University, and by the extent of that University, to excel "Ireland with her sixty-three, Russia with her sixty-eight, or France with her seventy-five Agricultural Schools."

It is but a few years since legislation was first had upon the subject of Common Schools in Pennsylvania. The system entailed taxation—taxation in town and township—it met with opposition—its principles were discussed—the public mind was enlightened—opposition ceased, and we now exceed in provision for common school instruction, every country in Europe, except it be Prussia. So I trust that it will be with our agricultural schools—that a general system will be established, and that it will be the pride of every farmer to have his sons taught the "principles of agriculture, its theory and its practice"—and that it shall not be said of the next generation, that the business of farming is left to those who "only talk of oxen."

Much complaint is made of the incompetency of teachers, and I find friend Garber is loud in his denunciations of those, "who teach school at the expense of the tax payers, merely to qualify themselves for higher branches, careless of their charge, and the consequence is the children go to school year after year, and are none the wiser in the end." There must necessarily be difficulties in all great reforms, and certainly the system of public school instruction, is such. There is a wide demand for teachers, not only in our own, but several of the neighboring States, and the evil of incompetent teachers is being rapidly corrected. I have been a director myself, with the exception of a short period, for the last twelve years, and I am proud of the great improvement in discipline, in the deportment of the children, and in the enlargement of the branches taught. In schools, where but a few years ago, the very first rudiments—the A B C were taught, I had the gratification on my last visit, of hearing large classes declaim with credit

to themselves and to their teachers—and other classes reciting from the last pages of their works on philosophy and surveying. I am thankful for what has been done, and not disposed to repine over what has not yet been accomplished. But I am digressing.

I propose to each member of the State Society, that we carry out the spirit of the resolution unanimously adopted by the convention recommending agricultural education, by taking with us to the State exhibition in October, a short memorial to the Legislature, prepared for signature, and then have our friends sign, asking for a college to be endowed by the State, as recommended by Mr. Russel. Such an array of names, and such an influence will not be disregarded by the Legislature.

I propose further to each member of the County Societies throughout the commonwealth, that we call meetings—discuss the subject of agricultural education, and in a body memorialize, each our own representatives and senators, to exert their influence in favor of an agricultural college.

The college, must precede common school education. Teachers will there be prepared for imparting knowledge in this branch of science in common schools, as they are now prepared in high schools and colleges and sent forth by the hundred to give instruction in the ordinary studies of English and classical education.

The Legislature promptly and liberally responded to the call for aid by the State Society, made at a late day of the session. For the promptness with which our memorial was answered we are much indebted to the worthy and active chairman of the committee on agriculture, Mr. Haldeman, and I take pleasure in acknowledging thus publicly our indebtedness. With equal promptness the Legislature responded to the call of the State Society for the publication of Prof. Rogers' geological survey.

The agriculturists compose two-thirds of the population of our State. By concert of action through our State and county societies we can bring such an array of influence as will be irresistible. Much has been done, and very properly and profitably for the endowment of colleges for the benefit of the learned professions—let there now be a very liberal appropriation toward carrying out Mr. Russel's project of an agricultural college. Let us ask for something definite, and if in the wisdom of the members of the legislature, they can devise a measure better suited to the wants of the farmer, to them be the praise.

A. O. HIESTER.

Estherton, June, 1851.

THE wash of the drain from a farm house when well mixed with loam, is excellent manure. Loam will soon neutralise all the foul effluvia arising from the putrid waters.

Sketch of the history of Cicada septendecim,
BY D. W. HARTMAN, M. D., OF WEST CHESTER, PA.

[Read before the Chester Co. Horticultural Society.]

The usual period having arrived for the visitation of the Cicada septendecim, commonly called the seventeen year locust, I deem a few remarks relative to their economy appropriate on the present occasion.

The common name of locust was given to this insect from the circumstance of their appearing in large swarms periodically, like the locusts of eastern countries. This name, however, is an error. The locust of eastern countries being what we term here a grasshopper. That the locusts spoken of in scripture, (which to this day are the curse of eastern countries,) were not like the insect under consideration, is readily proven from the account given of them. They are represented as "devouring every green thing," and to be able to accomplish this they must be provided with jaws as the true locusts or grasshoppers are, while our insect possesses a *haustellum* or sucker, and takes its nourishment principally while in the larva state under ground. The vulgar name of harvest fly is more appropriate to this insect from the fact that most of the species in the United States belonging to the genus Cicada appear about the time of harvest. The Locusta proper, or grasshopper, belongs to a different order, and has quite a different structure. We have several other indigenous species, only two of which, however, are common to this vicinity. *C. cunicularis*, and *C. pruinosa*, both of which appear later in the season than the septendecim.

The insects of the order Homoptera (to which Cicada belongs) live by suction only, and for this end they are provided with a haustellum or sucker through which they imbibe the juices of animals and plants. The bed-lug, squash-lug, plant lice or *Aphides* and the Coccides or bark lice are familiar examples of this order.

The trivial name septendecim appropriately refers to the periods of their visit, which is once every seventeen years, and although this is the regular period for their return, circumstances may retard or accelerate their progress to maturity. I noticed the song of one or two individuals last year, that from some cause or other anticipated the usual time, and others have occasionally observed a few individuals the year following the regular period.

Though they appear but once in seventeen years within certain circumscribed limits, yet from the published accounts of those who have written on the subject, they are found within some parts of the United States every year, observing, however, (with the exceptions before mentioned) their regular law of periodicity. In some districts of country neighboring swarms overlap, and in such places they appear once every eight or nine years respectively.—

At the present time if you dig a few inches beneath the surface of the soil, particularly beneath large trees, you will come upon their chambers, which are from six to twelve inches long, and five-eighths of an inch in diameter. The sides and tops of these chambers are covered with a varnish by the insect, which renders it water proof. During warm, pleasant weather they ascend to the top of the chamber, but retire to the bottom on the least appearance of cold or rain, and as the period for their final transformation arrives, they ascend nearer the surface, where they can enjoy the benefit of light and air.

The time having arrived in which they are to assume the winged state, they leave the ground, and crawling up the trunks of trees and other objects which may happen in their way, they cast off the shell enclosing the chrysalis, which is often left sticking by the claws to the place where the change occurred. The process of casting the skin of the chrysalis is usually accomplished towards day or early in the morning. Their bodies and wings after this are for a time moist and soft. If performed late in the day, the wings would become dry before they could have time to expand, and thus render them unfit for flight. The same circumstances influence the period of metamorphosis of many other insects, particularly those kinds possessing wings of a delicate texture, as Neuroptera (dragon-flies), Diptera (flies) and Lepidoptera (butterflies). The usual time of their appearance when in the winged state is about the 20th of May, but it depends in a great measure upon the season, being a few days earlier if the spring is forward and the weather warm, and later if cold and wet. In the south they appear as early as February and March, while in the eastern States they do not appear until June. North of forty-four degrees latitude the Cicada septendecim have not been found.

In about two weeks from the time they first make their appearance, they will all have assumed the winged state; and from this time until the latter end of June or beginning of July they are engaged in providing for a continuance of their species.

Should any of our horticultural friends possess any favorite trees or shrubs, this will be the period to see that they are protected from the attacks of the female Cicada, who, in her instinctive desire to continue her species, deposits her eggs alike on all trees or shrubs, except pines or other trees containing turpentine.—For small trees and shrubs a covering of millinect is recommended; would not a coating of thick whitewash, applied with a small brush, to the upper surface of the smaller limbs and shoots answer equally as well, or what perhaps would prove more offensive to the insect, a coating of coal tar or whale oil soap? The smaller limbs and young shoots are preferred by the parent insect, as some suppose, on account of her grasping these more readily by her legs, which enables her to make great pressure upon the point of

the ovipositor and thus facilitate the operation of penetrating the bark or sap wood. A more plausible reason for their choosing the smaller branches and young shoots, is to be found in the fact that they are more tender and afford less resistance to the ovipositor of the insect. The incisions in which the eggs are deposited are always made in the direction of the fibres of the wood and generally penetrate some depth into the sap wood, thereby injuring, if not killing the branches by cutting off the supply of sap. The fluid eliminated at the time of depositing the egg, may possess poisonous properties tending to the same result.

The grooves are made by a curious instrument consisting of three pieces, the centre one of which is fixed in the bark and remains stationary, while the side pieces, which partake of the nature of the rasp and saw, are alternately thrust up and down into the wood in an oblique direction, detaching small fibres which afford a kind of protection or covering to the eggs when deposited. The eggs are deposited in these grooves in pairs, obliquely, and from ten to twenty eggs may usually be found in a groove. This operation is repeated in the adjoining limbs until four or five hundred eggs are deposited by the parent, after which they soon languish and die.

Three or four weeks after the eggs are deposited in the branches, they will be ready to hatch, and they are so transparent that by means of a good glass the form of the included insect can be readily seen. The young insect as soon as it escapes from the egg, is very lively, being about the size and possessing the rapidity of motion of the smallest ant. Their instinct soon prompts them to reach the ground, and running to the side of the limb, they deliberately loosen their hold and let themselves fall to the ground, which, owing to their inferior specific gravity, they generally reach in safety. They at once begin to bury themselves in the earth, and in a brief space of time they will be found attached to the roots of plants or trees in the act of imbibing the sap, their appropriate food, as discovered by Miss Margaretta H. Morris, of Germantown, a lady whose knowledge of entomology is only equalled by her ardor in its pursuit.

The failure of many of our fruit trees over twenty years old to produce fruit, was attributed by Miss Morris, to the constant drain of sap to nourish so many grubs. Acting under this theory she caused the earth to be removed from a pear tree that was declining for many years, and the result was, to use her own language, "the discovery of countless numbers adhering by their beaks to the roots, twenty-three were found on one root a yard long and one inch in diameter. They were found on all the roots that grew deeper than six inches below the surface. The roots were unhealthy and bore the appearance of external injury from small punctures. On removing the outer bark this appearance increased, leaving no

doubt as to the cause of the disease. The larvae were enclosed in a compact cell of earth, with no outlet except that in immediate contact with the root, and as there were no galleries or holes leading from these cells, I infer that the grubs never leave the roots they first fasten on, which may account for the great difference of size, the small ones being starved specimens of the same brood."

On a subsequent occasion, the same lady presented the Academy of Natural Sciences of Philadelphia, with specimens of the Cicada septendecim that were taken along with several hundred others from the roots of another pear tree that was examined, leaving room for the inference that many failures of a fruit tree to produce a crop may justly be attributed to the presence of the larva of this insect. Possibly the failure every other year of the crops of shellbarks and chesnuts may be the result of a similar cause. These insects are subject to many accidents, and have many enemies, all of which tend to diminish their numbers and thereby keep them in check. Hogs are very fond of them, and you may see them daily turning up the ground in the search for the chrysalis. Birds and poultry of all kinds destroy vast numbers of them in all stages, from the egg to the perfect insect. The various insectivorous animals as the skunk, possum, shrews, and moles, also feed upon them. Miss Morris found numerous burrows made by the last mentioned animals to and from the roots of a tree containing larvae of the Cicada, most of which had disappeared, while the roots of neighboring trees were filled with the insects that the moles had not yet discovered. The various rapacious insects also contribute their share in the destruction of the eggs and larvae soon after they are hatched. The Indians are very fond of the larvae when fried; and when the disgust which they at first excite is overcome, they are esteemed quite a luxury by those who have had experience in the matter.

The males only of all the species of Cicada possess the power of emitting sound. The instruments by which it is produced consists of a pair of organs which may be said to resemble kettle drums, one of which is placed on each side of the body. These drums are formed of thin convex membranes covered by numerous fine ribs, and are acted upon by muscles fastened inside of these drums. When these muscles contract or relax (which they do with great rapidity) the drum heads are tightened, and loosened recovering their natural convexity by their own elasticity. The effect of this is to produce a rattling sound resembling that caused by a succession of quick pressures upon a slightly convex and elastic piece of tin. The large convex valves beneath the abdomen tend to increase the sound by rendering it louder.

SAL volatile or hartshorn will restore color taken out by acids. It may be dropped on the silk without doing any injury.

THE HORSE.

AN ESSAY ON THE EXTERNAL FORMATION OR
STRUCTURE OF THE HORSE, AND ON THE
DISORDERS ORIGINATING THEREIN.

[Continued from page 78.]

Of all points of a horse, the shoulder, for a hackney, or a hunter, is of the utmost consequence; without a good shoulder, no horse can ride well; he may be a good harness horse, or he may race well; but it is physically impossible for him to carry his rider with ease and pleasure on the road. These are no speculative opinions, but facts, grounded on the experience of all men who know a horse when they see one, and the result of our own every-day observations—so much does the action of the fore extremities depend on the structure of this part. And now, what is it that constitutes a good shoulder, and how are we to know a good from a bad one? In order to render our answers to these questions intelligible, it will be necessary for us to deviate a little, and say something on the internal mechanism of the part. The scapulae, or shoulder blades, are attached to the ribs by many powerful muscles, which move them, during the action of the animal, round their own axis, or, at least, in a very similar way; and though they can only revolve through the small segment of a circle, that segment is greater in proportion as they are more obliquely placed against the sides of the chest; hence it will be seen, that what is called an oblique shoulder is most advantageous for motion. Again, the best shouldered horses have, generally, thin withers; but this is not indispensably necessary to the formation of a good shoulder, for we know some, and good judges, who are of a contrary opinion. We must confess, however, for our own part, that we prefer fine withers. The thickness of the withers will depend on the conformation of the chest and obliquity of the scapulae, and not so much as some persons, high in veterinary repute, have supposed, on the length of the dorsal spines.* Now, if, in viewing the fore parts of a horse, we find he rises upon the withers, (and we must take care that this be no illusion, produced by placing his fore legs upon rising ground,) and that no traces of his blade-bone can be seen under the skin, but all appears smooth and level, we may conclude that the shoulder is oblique; though a

more direct proof is furnished us by carrying the eye from the summit of the withers to the extremity of the point of the shoulders. If it is upright, or nearly so, unless it be in a thorough-bred horse, (such a shoulder is only fit for the collar,) we shall perceive an irregularity under the skin, just below the withers, by passing our hand over the part, and find, on grasping the part, that it is thick and clumsy, because we are actually at the time grasping the blade-bone as well as wither-bone; though (as before observed) these may be thick from the construction of the chest.

A lean shoulder is one having thin withers, covered with fine and genuine muscle; a loaded, or overloaded, one with thick withers, clothed with coarse and flabby muscles; and the thickness of the wither, as we said before, depends on the obliquity of the shoulder-blades, and the proximity of their superior borders to the dorsal spines. That horses have been fast runners on the turf with bad shoulders, is no proof that they would not have galloped better and quicker with good ones; and we must recollect that in a racer the hind quarters are of primary importance, the fore quarters only of secondary consideration; but, on the road, we know that bad-shouldered horses are never pleasant nor safe hackneys; they step short, are puddling walkers, roll about in their trot, and are exceedingly likely to go to prayers.

The fore-leg should descend in a straight line from the bottom of their shoulder, i. e. in a lateral view; but when seen in front, it ought to incline gently inward. If the elbow projects gently backward, and the toe points with precision forward, we may rest satisfied that the horse is not twisted in his fore legs. Turning the toe in or out in standing is apt to be accompanied with distortion, or deformity of the limb. This circumstance, therefore, is seldom seen without materially lessening the value of an animal. Of the two faults, turning them out is the greater, for the pointing inward is seldom carried to the extreme.—A good arm is broad and thick, long, when compared to the leg, and marked exteriorly by muscular prominences. The elbow cannot project too far back, and the plumper the muscle is immediately above it, the greater we may conclude to be the animal's powers.

The knees ought to be large, broad in front, and distinctly marked with several bony knobs; lateral thickness is, also, of much importance. When the radius, (the bone of the arm,) instead of descending in a straight line, is directed backward, so that the knee appears to recede from it, the horse is said to be half-kneed, a term that well conveys the idea we have of this formation: it is always objectionable for the saddle, but not for the collar. The leg should fall in exactly perpendicular from the carcass, and be short when compared with the arm, the converse of this being indicative of weakness; and of sufficient breadth to enable a purchaser, even at a distance, to distinguish the tendons and bone, with perfect clearness, in their relative situations; for, if he cannot do this, there is reason for suspecting that he is gummy, the effect of hard work or premature use, and never a natural defect. Should the legs be round and straight below, they are called stilt, and are never firm and good. But the best and only correct way to judge of legs, is to pass the hand down them; if they measure much round, and the sinews feel firm, hard, and distinct, like well-braced cords, and if the intervening spaces between bone and sinew be clean—free from gum—we may pronounce that they are good.

The fetlock, as a joint, should be of large dimen-

* Bones of the withers. It is contended, on another side, that the situation of the scapula has nothing to do with the thickness of the shoulder, but that it is wholly owing to the length of the spinous processes of the dorsal vertebrae. To establish this opinion must be proved two data, viz: 1st, that these spines are short, or comparatively so, in all thick-shouldered horses, and long in thin-shouldered ones; and, 2dly, that the converse of this never happens.—To one who has dissected shoulders, these are certainly home-thrusts; such, at least, as we could not parry; though we know that these bones may and do, like those of most others, vary in different horses.—But they also vary in their degrees of inclination; and may not this circumstance alone, in some measure, effect the construction of it? At all events, we know these facts, dray or cart horses have wide chests and thick shoulders; others with wide chests have thick shoulders, but with narrow chests thin, unless the scapulae be upright. Now, if they who differ with us, mean to assert that all this arises solely from the length of the dorsal spines, we can only say, *credat judicis appella.*

sions, proportionate with other parts; no joint, in fact, is too large, providing the bony prominences be distinctly seen with the naked eye, and its ligaments perceptible under our fingers. I need not, therefore, farther enforce this truth in speaking of these organs. Knuckling over in the fetlocks is a sign of original malformation, such as uprightness in the pasterns, or else is the result of hard work; and the tottering affection of the limb, accompanying this state, is caused by local debility and excessive irritability in the nervous system. The pasterns always deserve much of our attention; when good, their length is proportionate with that of other parts, and they incline, with much obliquity, downward and forward to the foot, should they approach the perpendicular, they are almost always short, and are said to be straight or upright; but when they approximate to the horizontal, they are long, and called, though erroneously, oblique; for they are not so obliquely placed, under these circumstances, with regard to the leg, as they are when properly constructed. Perhaps no part of the horse exhibits the wisdom of nature more, in regard to the adaptation of it, in point of structure, to the purpose for which the animal was designed, than this: in the racer, for example, the pasterns are lengthy, and incline to right angles with the legs, whereby more weight is imposed upon the hinder parts of the fetlock and hoof, in which situations are placed pieces of mechanism which by their elasticity serve as so many springs in diminishing the effects of concussion so requisite in this animal, which was intended to perform swift and sudden movements; but in the cart-horse, whose action is slow and powerful, the pasterns are short and nearly upright, so that most of the weight is thrown upon the main bones of the foot, and thereby his springs, which have less play than the Arabian or thoroughbred, are not so much acted upon; consequently less provision is made against concussion, for strength, and not elasticity, is sought for in the construction of this powerful animal. Horses with very oblique pasterns are more likely to break down, and for this reason they ought never to be shod with thin-healed shoes; on the other hand, if they are very short and upright in these joints, they are seldom or never sure-footed, and will soon become stilted and groggy from work.

The hoof next engages our notice, and this is a part of which we should be more than commonly scrupulous and nice in our inspection: "No foot, no horse," is a trite but very true adage, and one that is not kept sufficiently in view by the purchasers of horses, or they would not have so frequently to lament their hard fate in having gone to market for a screw. First, we should look to the size of the hoof: a small foot is not only objectionable in itself, even though it be a natural formation, but is often a characteristic of disease; but a small and upright foot is a morbid structure, and is scarcely ever seen in any one but a dancing-master, or light-timbered tit.—White hoofs are to be eyed with suspicion; they are really weaker, and more liable to disease than dark or black ones, and if a horse has one white and the other dark-colored, and he is lame, in nine cases out of ten it is the white foot that is affected. So much with regard to the foot before it is taken up. Other considerations now engross our attention. Is it contracted? i. e. is its circularity destroyed by narrowness at the heels? A good hoof is circular in the tread, or nearly so, measuring as much from side to side as from toe to heel; but we frequently find those that are morbid measuring as much from toe to heel as twice the lateral diameter. On the other hand, the

wall of the hoof, which should, at all times, be perfectly smooth and free from ridges, (the contrary indicating disease,) may be very oblique, in which case it is not only circular, but spreads out, even to a morbid degree, in the tread. Large, heavy horses, such as are bred in low, marshy situations, are most subject to have this kind of foot, in which parts of the country it is preferred by many people, who contend that their hunters derive advantage from it. As the strong and upright foot is likely to become contracted, so is this subject to a disease called fleshy soles; indeed, in the former, the sole is concave; but in the latter it is flat, on which account the two require different modes of shoeing.

The body, or carcass, may be subdivided into the chest, belly, and loins. So far as regards the constitution of the horse, his stamina, or his bottom, no part is of more consequence than the chest; but, like that of many other parts, no particular construction of it is the best for all kinds of horses. That of the cart-horse should be circular, broad in the bosom, and large in the girth; that of the thorough-bred more circumscribed, but not flat-sided, very deep, and also extensive in the girth; so that the two differ more in width than in depth. Had the racer possessed a broad, circular chest, his shoulders must have been thick, and his fore legs far apart; and no horse so made can gallop well or fast, though many such are ridden as hackneys; they are apt to have a rolling gait, and an awkward mode of going altogether, perceptible at all times to the connoisseur in horse-flesh; but we must be careful, even in choosing racers, not to run into the other extreme; for, if both legs come out of one hole, or he be flat-sided, he cannot endure much fatigue, is very probably a bad feeder, and certainly predisposed to disease of the chest. A full and prominent bosom is a fine point; and the ribs should stand out with sufficient curve to afford space enough within; for which reason, some, as we before remarked, prefer a thickish shoulder, if it be an oblique one; and another advantage accompanying such conformation is, that we have something between our legs when mounted, a property, certainly, that every horse ought to possess. As to the belly, its shape will depend much upon that of the chest and loins. A narrow-carcassed horse can never do much work, readily loses his condition, and with difficulty recovers it, being very commonly, but a queer feeder. We should have something to kick against, and unless he carries his dinner with him, his bread-basket cannot be said to be of the best description.

The back should be perfectly straight; a hollow back is a sign of want of strength; but it is often extremely pleasant to the rider. A roach-back, the reverse of a hollow back, is by no means handsome, though some argue that horses having such are stronger; one objection to it is that it is apt to chafe from the saddle. The loins are a point that we should always be nice about. A hollow back and a narrow loin are generally indicative of natural weakness; but the latter is far more exceptionable than the former: a horse so formed can seldom carry much weight, soon knocks up, and often proves a bad feeder; his constant hollowness in the flank, and his lank appearance altogether, after a day's hunting, demonstrate how incapable he is of bearing the exertions required of him.

[TO BE CONTINUED.]

HORSE collars filled with air instead of hay have been invented by T. M. Coleman, of Pennsylvania. They will not chafe the horse like those now in use.

Improved Cattle.

Galloway Ox in good condition.

The breeding of cattle has been, from time almost immemorial, the principal object of pursuit with the Galloway farmer. The soil and face of the country are admirably adapted for this. The soil, although rich is dry and healthy. There are many large tracts of old grass land, that have not been plowed during any one's recollection, and which still maintain their superior fertility; while the finer pastures are thickly covered with natural white clover, and other valuable grasses. The surface of the ground is irregular, sometimes rising into small globular hills, and at other times into abrupt banks, and thus forming small fertile glens, and producing shelter for the cattle in the winter and early vegetation in the spring. In the low districts there is little frost and snow, but

the climate is mild and rather moist; and thus a languid vegetation is supported during the winter, and pastures constantly retain their verdure.

The young cattle are chiefly bred and reared to a certain age upon the higher districts, or upon the inferior lands in the lower grounds. A few cows are kept in the richer soils to produce milk, butter, and cheese for the families; but it is found the more profitable to breed and rear the cattle upon the inferior lands, and afterwards to feed them upon the finer ground and the rich old pastures. There would be no objection to this if the Galloway farmers would afford their young stock a little shelter from the driving blasts of winter.

The regular Galloway breeders rarely sell any of their calves for veal; which is obtained only from those who keep cows for supplying the villagers with milk, and from the few dairy farms where cows are kept for making cheese.—*Youatt & Martin on Cattle.*



GALLOWAY OX IN GOOD CONDITION.

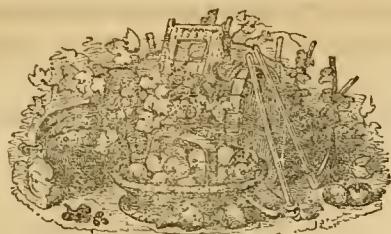
LARVAE OF THE LOCUST AND FRUIT TREES.—A gentleman who had several fruit trees in a declining condition at the time of Miss Morris' announcement of the discovery of the fact that the larvae of the locust attach themselves permanently to the roots of trees, informs us, that he waited upon that lady, believing the sickly condition of his trees to proceed from these insects. A conversation with Miss M. satisfied him of the correctness of his impression. Instead of digging around the roots and detaching the larvae, he, in the fall of the year, bored a half inch auger hole in the body of each tree to a depth of two or three inches, which he filled with the flour of sulphur and plugged shut. The highly flourishing condition of his trees the following spring, convinced him that he had effectually removed the cause of their former unhealthiness.

A good master is kind to his beast.

FLEAS.—A correspondent who has been sorely annoyed by these pests, informs us that he has succeeded in ridding his house of their presence and himself and family of their bites, by spreading the floors morning and evening, for a few days with a decoction of sassafras. The remedy is simple and easily tried.

GLAZED POTS are the most suitable for plants kept in balconies, where they are much exposed to the air, as they do not admit of transpiration from the sides, and consequently the earth contained in them does not so soon become dry.

THE entire imports for Canada for 1849 was £3,002,599, in 1850 £4,245,517; about one-third of the whole import was from the United States. The trade of Canada with this country is yearly increasing, and becoming of importance and consequence.



Horticultural Department.

Lancaster County Fruit.

We have for years contended, that the fruits grown in Lancaster city and county would compare favorably with those of any other section of the State. In this opinion we were supported by a few, but the majority was against us. To satisfy others, we called upon several of our citizens—Dr. Parry, M. Ehrman, and Emanuel W. Carpenter—and procured from each specimens of the different varieties of cherries grown by them. These were carefully boxed up and sent to Dr. William Brincklé, chairman of the fruit committee of the Pennsylvania Horticultural Society.—We give below the Dr.'s acknowledgment of the receipt of the cherries, and some observations upon them, to which we invite the attention of those who were skeptical in regard to the high character of the fruits grown in the vicinity of Lancaster. Such commendation, from so high a source, is certainly gratifying and we trust that others who cultivate fine fruits will give us an opportunity of placing them before the committee over which Dr. B. presides, in order that our Lancaster horticulturists may assume their proper position amongst their brethren elsewhere. Our candid impression is, that the fruits of almost every kind grown in this neighborhood are equal in every particular and superior in many, to any others grown in the State. For proof of this, we invite all to attend the exhibition which is to be held some time during the coming fall.

PHILADELPHIA, June 19, 1851.

My Dear Sir—Your esteemed favor without date, accompanying a box of most magnificent cherries was received this afternoon. Please to accept my warm acknowledgements for your kind attention.

Your cherries are something to boast of and evince the fine progress you are making in Horticulture in Lancaster. One of the cherries, "the Cumberland seedling," is quite new to me. I presume it is the same that is called the "triumph of Cumberland," at Carlisle, of which Mr. David Miller sent me buds last summer, with a description of the fruit.

The "yellow Grafton" is the Bigarreau or Graffion—the Amber of Coxe; under the last name it is usually known here, and took the first premium at our Horticultural meeting on Tuesday evening last.

The Napoleon Bigarreau is correctly named, and the specimens truly splendid.

The "Doubtful" looks very much like the Black Tartarian, and cannot, from its external appearance, be distinguished from the Cumberland. But Mr.

Miller informs me that the trees of the Triumph of Cumberland and the Black Tartarian are essentially different in their growth.

The four remaining varieties I think are all the same variety—the English morello, and the finest specimens I have ever seen. Has there not been a mistake in the May Duke? The Kentish is a small cherry, and is known here as the Early Richmond.

I have not yet tasted any of the cherries, as I wish our fruit committee to see them.

Nine or ten varieties of my new raspberries are now ripe—they are very large and fine, could not you, Mr. Carpenter, Dr. Parry, and Mr. Ehrman, make a flying visit to Philadelphia to see them?

Very truly yours,

W. D. BRINCKLE.

Chester Co. Horticultural & Industrial Exhibition, Held at West Chester on the 12th, 13th and 14th inst.

MR. EDITOR:—This exhibition came off, on the above days, and, to an observer visiting the borough, evinced a rather extraordinary amount of go-ahead-itness on the part of the citizens of West Chester, and the county, and was encouraging to adjoining counties to go and do likewise. Here was a Horticultural Society, established but a few years since, which had built for itself a capacious hall, (said to be the second one only in the country built especially for horticultural purposes,) and holding besides regular monthly meetings, two semi-annual exhibitions attended by some thousands of people.

It was calculated that the number of visitors on the last day of the exhibition was from two to three thousand.

The printed schedule of premiums for this season of the year, is not confined to horticultural objects, but embraces all kinds of manufactures made in the county, such as agricultural implements, coach and harness work, dentistry, cabinet work, every variety of mechanical ingenuity, and articles for domestic use, needle work and embroidery, &c. All classes of the community are thus interested, which accounts for the very large attendance and interest manifested.

The numerous bouquets and floral embellishments, and the large display of green house plants, roses, verbenas, &c., from the two nurseries of the borough, occupied considerable space in the hall and attracted much attention. One of the nursery firms, that of Paschall Morris & Co. have connected with their establishment a large agricultural and horticultural warehouse, and displayed on this occasion a large assortment of implements for the farmer and gardener, including the new improved patterns of ploughs, harrows, wheat and other drills, horse rakes, corn shellers, &c. This establishment promises to be of great use to the farmers of Chester and adjoining counties.

OBSERVER.

DON'T delay the cutting of your grain until it is dead ripe. As soon as the straw immediately beneath the head becomes yellow, then commence your harvest.

Dwarf Pear Trees.

MR. EDITOR:—So much has recently been published about the advantage, economy, and beauty of dwarf trees, pear, apple, and cherry, that one might fancy every six feet square, in certain regions, teeming with golden Beurre's, golden Rinett's and sweet Montmorencies.

You, Mr. Editor, have ever been ready to expose humbug in other departments; and I hope, as head of our Farm Journal you will assist us in arriving at agricultural and horticultural truth.

Is it not unfortunate, that unsuccessful experiments are not more frequently recorded?

If want of success in the following experiment, be owing to the bungling manner of its performance, the deception of others, or inherent, let us try to get at the truth.

Five years since a number of pear buds were inserted on common orange quince stalks. The next season they grew from three to five feet. The following spring transplanted and headed back. They have all died since without producing fruit. About that time much discussion arose as to the variety of quince best adapted for stalks. A majority seemed to decide the Portugal. One thousand of these were ordered by the worthy President of your society, (Mr. Frantz,) from Ellwanger & Barry, of which, as a novice, I procured one hundred. (They proved not to be Portugal.) These were planted in the autumn of 1848, grew finely the next season, and were budded. Last season they grew from two to four feet well branched. This season, without removal they were mostly headed in. Their leaves expanded and soon they commenced to—bloom? No! But die. Now two-thirds are entirely dead, and still they die. So much for my experiment. Let me add something from observation and the experience of others. By the way, I most sincerely hope the gentleman before alluded to, will let us have the benefit of his extensive experiment, with his hundreds: and the rich crops obtained from the *large* trees purchased at a dollar per piece from Prince & Co.

A short time since, I had the pleasure of a walk in the gardens of one of our most enthusiastic practical amateurs, whose vegetable, fruit, and floral departments, are *au fait*. His dwarf pear trees were eight to ten feet high, well branched, and cultivated with the greatest care. My inquiry for fruit of the proprietor, Dr. Thomas, was answered—"Humbug! They have been nursed for half a dozen years and scarcely produced as many good pears!"

That pear trees on quince roots do in some instances and situations, or on some varieties of quince, succeed well, and are very productive, we have abundant evidence of the highest character.

Such men as Perkins and Wilder who speak of gathering barrels of the finest pears from dwarf trees, are beyond suspicion. That we, in this section of

the State will be equally successful is considered very doubtful by others than your bungling experimenter.

J. K. ESHLEMAN.

Chester County, Pa.

[Will our friend Frantz comply with the request of our correspondent, and favor us with the result of his experiment? We hope he will, and at the same time we shall be glad to hear from others who have attempted to cultivate the pear tree on the quince stalk, whether successful or otherwise.—*Ed.*]

An Evening Walk in June.**THE FRUITS OF THE SEASON.**

Louisa.—Oh, come and see my strawberries first, uncle. They are not so fine as Edwin's, and I want you to tell me why.

Uncle Philip.—Edwin's plants are, certainly, the most luxuriant and the most productive.

Louisa.—Yet they are the same varieties, planted, too, on the same day, in the same garden. Edwin divided with me those fine plants of new sorts which you sent us last August, and we each took a share of the staminate, necessary, you said, to secure productiveness.

Uncle.—Was the soil of the beds in like condition?

Edwin.—Mine was an onion bed from which we had just taken the crop. It was very mellow; it had been covered with very rotten chipdirt in the spring. I merely dug the ground and set out the plants in the manner you directed. John dug her bed well, and put in plenty of manure from the horse-stable.

Uncle.—Here lies a difference. Plants do not like raw food, it must be *decomposed*. Edwin's was well cooked or composted, while yours, Louisa, was too rank. Did your plants become yellow?

Louisa.—Yes, they did, while Edwin's were beautifully green and flourishing. But he manured his in October or November.

Edwin.—Yes, I heard uncle speak of that last year, and I wrote a memorandum of it in my pocket book. See, here it is: in "October. Now strawberry beds should manured and dressed."

Louisa.—But why did not that manure injure Edwin's?

Uncle.—At that time growth had nearly ceased, and the small amount taken up by the roots during winter was invigorating, while the straw served to protect the tops.

Louisa.—So, I see that in order to excel in growing strawberries I must not wait till spring to make preparations.

Edwin.—Father explained to me this morning what is meant by "fallowing;" the principle seems in part the same. Our teams are now busy preparing land for seeding next fall, consequently for next year's growth of grain.

Louisa.—Edwin's note-book, too, has proved of service. I must record what I have learned now, and next year at the proper season it will occur to

me, and I shall avoid so much of error. When cousins came the other day to see us, I could scarcely give them a berry, while Edwin supplied them with as many as they could eat from one or two hills, and such splendid fruit, too. I was ready to blame Providence for partiality, for I did not think that I had injured my plants myself by injudicious kindness.—Now I see that error too. As I become a better gardener I shall become a better girl. I see the force of the saying, that the tiller of the soil is a co-worker with the Almighty.

Uncle.—Courage and faith, Louisa, are noble attributes which you seem to possess. Come and eat some pears from my trees until these become strong enough to bear perfect fruit.

Louisa.—Thank you, uncle, yet I shall look forward with desire for the fruit from the trees I have tended. One eats it with such relish, to say nothing of the pleasure of sharing it with friends. It occurs to me now that I have seen directions to pinch off buds of roses, alpine strawberries and raspberries in spring when it is desired to have a crop in autumn.

Edwin.—Is your plum-garden still safe? Cousin Henry complains that the curculio has stung his plums in spite of pigs and poultry. He has his plum-yard enclosed and has kept a number of pickers and grazers constantly engaged in it since early spring.

Uncle.—He will not see the full result of this simple & excellent plan until after one season.

Louisa.—There is a fine shower coming; it will swell up your Hoveys and Hudsons to their full size. If you will pick some, Edwin, I will gather some of these nice White Hearts and Eltons; their fair complexions will contrast finely with your red strawberries. There seems no bound to the enjoyments we derive from horticulture, and they are so varied that it is impossible to tire of one object before another attracts attention. We have become acquainted with many curious insects and birds, even every change of the weather is a source of interest. Do not these shrubs and flowers show well on that smooth close grass. Edwin mowed it three times for me this spring, and see how neatly he has trimmed the hedge. I suppose he wished to console me for the loss of my strawberry crop.

Uncle.—Your bed may be the strongest next season, as it is not exhausted by fruiting. W.

Boalsburg, Pa., May 20, 1851.

[The above communication was intended for our June number, but received too late for insertion. It contains many useful hints.—*Ed.*]

TO COOK THE PIE PLANT.—Much of the usefulness of this pleasant vegetable is frequently lost from the waste of time in cooking it. Many people suppose every stalk is to be skinned or peeled before it is fit to be used. This is all thrown away labor. The stalks are not a whit better after being peeled than before. All that is necessary is to cut them in slices and proceed as usual.

Horticultural Societies.

Proceedings of the Pennsylvania Horticultural Society.

The stated meeting of this association was held as usual in the Chinese Saloon, on Tuesday evening, June 17th. The President in the Chair. The display was very fair for a summer month, when green house plants generally are out of bloom and but little fruit matured. The Hall was crowded with visitors.

Of the objects shown, those only of interest will be noticed. In Robert Buist's collection of plants were *Jasminum tenuifolium* of recent introduction, and shown for the first time, a beautiful delicate species of that favorite genus—two Seedling *Gloxinias*, superb—No. 1, flowers of a delicate blush with a white throat—No. 2, Scarlet, throat white edged with crimson—*Magnolia Exmouthiae*, a dwarf plant bearing very large flowers—ten choice *Pelargonias*, as many select *Gloxinias* and a variety of other plants. Jas. Dundas' gardener exhibited three plants of *Cereus grandiflorus* or night blooming Cereus, each bearing expanded flowers—Lilies, *Gloxinias*, etc. Thomas Meehan, gardener to A. M. Eastwick (Bartram's garden) sent fine seedling *Calceolarias*, beautiful *Gloxinias*, *Fuchsias* and other plants with three specimens of *Chrysanthemums* in flower, which he by management has bloomed in the summer season,—the mode of culture by which he effected this result, he detailed to the Society in an interesting communication.

On the fruit tables were six pots of Grape vines, grown from single eyes, one year old, in full bearing, from the houses of C. Cope (president), of the Black Hamburg, white and Grizzly Frontignac, white Constantia, white Sweet Water and Lashmere's seedling varieties, forming an attractive spectacle: from the same source was a very large specimen of La Mercier Cherry. Dr. Brincké exhibited fine specimens of nine varieties of his new Raspberries, several of which were of great merit. Isaac B. Baxter—the Col. Wilder (Brincké's) Raspberries; large Gooseberries, and Cherries of Guigne noir, June duke and Portugal varieties. John R. Brincké presented a beautiful display of Cherries of the following kinds—Amber, Bigarreau gros Coquret, Black Tartarian, Barr's Seedling, Downton, Napoleon Bigarreau, Reine Hortense and a Seedling. By Geo. W. Earl, fine Amber Cherries; Black Eagle and Tartarian, by Thos. Meehan; and a number of varieties, by John Perkins. Anthony Felton, Jr., exhibited a fine specimen of Hovey's Seedling Strawberry; and James Powell presented five Seedling varieties of Raspberries. There were four extensive tables well spread with fine vegetables.

The following premiums were awarded:

For the best American Seedling Pink, to J. Mevins; for the best and most interesting collection of plants in pots, to Jas. Roby, foreman to Robert Buist; for the second best, to James Bisset, gardener to Jas. Dundas; for the third best, to Thomas Meehan, gardener to A. M. Eastwick; for the best Bouquet for the hand to John Gallagher, gardener to Miss Gratz; for the best Basket of cut flowers to Robert Kilvington, and for the second best, to Thomas Ryan, gardener to Caleb Cope.

For the best Grapes of a Black variety, to Thos. Ryan, gardener to Caleb Cope; for the best of a White variety, to the same.

For the best Strawberries, Hovey's Seedling, to

Anthony Felton, Jr. For the best Cherries, Amber, to Geo. W. Earl; for the second best, Black Eagle, to Thos. Meehan; for a fine specimen of Napoleon Bigarreau Cherry, a special premium of one dollar to John Perkins; and for a fine variety of Raspberry called Dr. Brinekile's Col. Wilder, a special premium of three dollars to Isaac B. Baxter.

For the best display of vegetables by a market gardener, to Anthony Felton, Jr; for the second best, to the same: for the best display by an amateur, to Wm. Felton, gardener to T. Wriggins, Frankford Road; and for the second best, to John Gallagher, gardener to Miss Gratz.

The following communication directed to the President of the Society from Thomas Meehan, gardener to A. M. Eastwick, proprietor of Bartram's Garden, was read:

Observations on the Culture of Chrysanthemums, with the object of obtaining bloom from them in the Summer months:

SIR: In the regulations of the Society, it is suggested that where the mode of cultivating any fruit or flower exhibited before the Society is peculiar, a few short observations accompanying it would be desirable. In the collection of flowering plants which I have exhibited this evening are some Chrysanthemums in bloom. As I have never succeeded before in any experiment to induce this plant to flower out of its usual season, and as within my knowledge no such experiment has ever succeeded before, I beg to lay before you the details of the treatment which has effected this result. When I first took charge of this establishment, last year, and after I had attended to matters of more immediate importance, it was too late in the season to raise a stock of Chrysanthemums by the usual means of slips or cuttings. I had one strong plant of the variety triumphans in the open border, and had its flower stems laid down into 10 inch pots, when well rotted these layers were taken off, and the treatment given to them which Chrysanthemums usually get. They bloomed better than plants which I had on other occasions raised from cuttings in the usual way. This productiveness of bloom in the layered plant, suggested its fitness for an experiment on flowering them again accordingly as soon as the flowers were fairly faded. I cut down six plants, reduced the balls, and replaced them in fresh earth in smaller pots. They were then placed in a cool part of a green-house and their shoots suffered to grow up without any pinching back. In May they began to show their second crop of buds, when they were again repotted and soon after flowered.

It will be observed that the flowers on each plant are not so numerous as we generally see them in the fall. Had the success of the experiment been anticipated, and consequently more attention been paid to reporting and high cultivation this defect would not exist.

As it is said that in "a multitude of counsellors there is wisdom" so in practical gardening a multitude of experiments reveal new truths, and this communication is made in the hope that others may be induced by the partial success of this almost random experiment to try what improvements can be made upon it.

I am, sir, yours most respectfully,

THOMAS MEEHAN.

A letter of acknowledgment from Prof. S. S. Haldeman in reply to a notification from the corresponding secretary of his election to honorary membership was read. On motion, adjourned.

THO. P. JAMES, Rec. Secretary.

Premiums Awarded

By the Chester County Horticultural Society.

The HORTICULTURAL EXHIBITION for June, closed on Saturday evening. The display as a whole, was very creditable, was well attended by visitors, and gave general satisfaction.

Premiums were awarded as follows:

For the best display of Green House plants, to Paschall Morris & Co. \$3; Second best do. to A. Marshall & Co. \$2. For the best display of Roses in pots, by nurserymen, to A. Marshall & Co. \$2. For this premium there was no other competition. For the 2d best design of cut flowers to Miss Phebe Ann Sharpless \$3; for 3d best do. to Tevis Hoopes \$2.— For the best display of flowers in a basket covered with moss or lichens to Alice Jackson \$2; for the 2d best do. to Elizabeth Haines \$1; for the 3d best do. to J. & M. Bennet, Cultivator for 1851. For the best bouquet suitable for the centre table to Mrs. Elizabeth G. Townsend \$1; for the 2d best do. to Thomas Harvey, cultivator for 1851; for the 3d best do. to John V. Painter, Garden trowel. For the best pair of bouquets suitable for the mantel to M. B. Thomas \$1.50; for the 2d best do. to Misses Sarah Morris, Susan Emlen and Mary Parker, Agriculturist; for the 3d best do. to Mrs. E. C. Jefferis, Garden Trowel. For the best pair of hand bouquets to Miss Sibilla Embree \$1; for the 2d best do. to Miss Elizabeth Clemson, Cultivator for 1851; for the 3d best do. to Frank Parker certificate. For the best 10 varieties of Verbenas to A. Marshall & Co. \$1; for the 2d best do. to P. Morris & Co., Agriculturist. Urn and three baskets covered with moss by Miss Jane Jacobs, Certificate of honorable mention.

In addition to the above, the following hasty sketch embraces most of the other contributions to this department, though it may contain some errors and many omissions:

Basket covered with moss and cut flowers by Joseph Farrell; basket covered with moss and filled with dried grasses by Miss Clara Williamson; Pyramid covered with moss and cut flowers by Miss Carrie D. Thomas; Basket covered with moss and cut flowers by Lydia Ann Hoopes; Vase of cut flowers embracing a sea-shell by Miss Hannah Embree; pair of Mantel bouquets by Miss Martha Clemson; Hand bouquet by Kady Barton; Vase containing 43 varieties of Roses by J. Preston Thomas, of West Whiteland; Basket covered with moss and ornamented with shells by Mrs. E. C. Jefferis; Basket of Peonies and other cut flowers by P. Morris & Co.; a Vase beautifully wreathed and filled with cut flowers by Mrs. John Hickman; A very tasteful design covered with moss and cut flowers by Masters Darlington and Crowell; Basket covered with moss and cut flowers from the garden of David Townsend, Esq.; Bouquet for centre table by Elm Sharpless; Bouquet for centre table by Mrs. Alexander Marshall; 2 Baskets of moss and cut flowers by Miss Caroline Baldwin; Vase of moss and grasses by do.; Design by John V. & Uriah H. Painter; Pair of mantel bouquets by Miss Elizabeth S. Marshall; Basket of moss and cut flowers by John V. Painter; Grotto of the Nereides, beautifully decorated with shells by Mrs. Thos. II. Fergus; case of Shells and Insects by Dr. Hartman; Case embracing 83 varieties of birds eggs by John V. Painter; Miniature farm by Master Thomas Sweeney; Basket of cut Roses by P. Morris & Co.; Bouquet for centre table by Mrs. John Monaghan; Case of sea-shells, large specimen of East Indies Coral and a beautiful central table, by Mrs. John P. Baily.

FLORAL.

Caetus, by Jane Lee Evans; do. by Sarah H. James.

Pair of high heeled shoes, of the olden times, by Phelia Ann Sharpless; Pin cushion, of the olden times, worked by Lydia Paniter, exhibited by Hannah M. Darlington.

VEGETABLES.

Peas, for the best half peck to P. Morris & Co. \$1; Beets, for the best display to Mrs. Rachel Taylor \$1; Cabbage, for the best six heads to Mrs. Rachel Taylor \$1; Potatoes, for the best quarter peck, growth of 1851, to P. Morris & Co. \$1; for the best display of vegetables by market gardeners to P. Morris & Co., \$2; for the 2d best do. to Lewis P. Hoopes \$1; for the best display of vegetables by amateur gardeners to Dr. George Thomas \$2.

The other contributions and contributors to this branch of the Exhibition were:—Peas by Mrs. Sally Ann Ingram; Onions and Beets by Samuel Harry; Rhubarb by Samuel Sharpless; Potatoes and Beets by Wm. Elbbs; Long necked Squashes of last years growth; Peas and Beets by J. & M. Bennett; Peas and Radishes by Josiah Hoopes; Potatoes and Peas by Thackary Smith; and Peas by Mrs. Rachel Taylor.

RIPE FRUITS.

Cherries, for the best one quart to Amos H. Darlington \$1; do. 2d best do. to J. Lacey Darlington, Pruning Knife; Strawberries, for the best quart to P. Morris & Co. \$1; do. 2d best to Dr. George Thomas, Rose shears; for the best display (sixteen varieties named) to P. Morris & Co. \$1.

In addition to the above, were specimens of Cherries by Sarah D. Grey, Jonathan C. Baldwin, A. Marshall & Co., and Lewis P. Hoopes. Apples by Jonathan C. Baldwin—Grindstone, Esopus Spitzenburg, Cart house, Grey house and Pennock. Apples by Ziba Darlington—Pennock and Cart house.—Strawberries by Samuel Sharpless.

Premiums awarded for Needle Work, embroidery, and the Fine Arts.

For the best display of Zephyr work to Caroline E. Krauser, \$3; 2d best do. to Miss Winterbottom, \$2; 3d best do. to Anna Mary Eachus, \$1; 4th best do. to Mrs. A. E. Moore, Certificate. For the best display of Crotchet work to Miss Sarah P. Hoopes, \$2; next best do. to Hannah Passmore, \$1. For the best display of Knitting to Miss Sarah P. Hoopes, \$1; next best do. to Rebeeca C. Griffith, Certificate. For the best display of Quilted work to J. & M. Bennett, \$2; 2d best do. to Elizabeth M. D. Cooper, \$1; 3d best do. to Miss Lamborne, Certificate. Special premium for wreath worked bed spread to Elizabeth Phillips, \$1; special premium for wreath worked bed spread to Hannah M. Pussey, \$1; Certificates of honorable mention were also awarded to Miss Winterbottom, Susan P. Wollerton, Mrs. Samuel Sharpless and Jane Sweeney for superior needle work. For the best display of Millinery to Mrs. Mary Hoopes, \$3; next best do. do. to Mrs. Hannah Still, \$2. For the best display of Needle work, other than the above mentioned—

Best design in Shell work to Mrs. Thos. H. Fergus, \$2; best Crayon Drawing, W. Townsend, Esq., \$1.50; best Painting in Water Colors, Dr. Carpenter, \$2; best display of Artificial flowers, in wax, Mrs. M. B. Thomas, \$2; best do. do., in paper, \$1.50; best specimen of Sculpture, in clay, to W. M. Swayne, \$2.

In addition to the above, there were many beauti-

ful specimens of needle work distributed in such positions that we could not read the names of the contributors, and must therefore be excused from noticing them more particularly.

INDUSTRIAL DEPARTMENT.

This branch of the Exhibition received a large share of the visitors' attention, and embraced the following, among other contributions:

Sewing Machine by Milton Early, and H. B. Odiorne; Riding Carriage by Abraham Still; Corn Husk Mattress by Imla J. Bennett; Bathing Tub by Jos. Fraily; Hydraulic Rams by J. C. Strode; several specimens of Galena, yielding 30 ounces of Silver to the ton, by C. M. Wheatly, from the farm of John Williams, in Charlestown township, Chester county; large Candy Cake, surmounted by a pyramid, by B. H. Sweeney; stand of Gentlemen's Hats, by Augee & Cowan; case of do., by Wilson & Heed; case of Cutlery, by Broomhall & Worthington; do., by John Marshall; Morse's Telegraph, by Lewis Lewis; case of fruits executed in wax, by Mrs. M. B. Thomas; Bouquet of cut flowers executed in paper, by the same; Dressing Bureau, by William Hoffman; Cushioned Chair, by Mr. J. L. Galliner; Extra Family Flour, put up in small sacks, by H. James; a large display of Agricultural Implements, from the Warehouse of Paschal Morris & Co., embracing, among other things, Seeding Drills, Revolving Horse Rakes, Self-Sharpening Plows, Double Mould Broad, do., Subsoil, do., improved hand Rakes, Hay and Vegetable Cutters, elastic steel Hay Forks, and many other valuable improved articles.

A Miniature Court House, surmounted with a steeple, and covered with moss, by Josiah Hoopes. Cement Pipe, for conveying water, (a new article,) by Gideon Miles. Shoes and Shoemaker, by E. H. Crossman.

Manufacturers not before enumerated:

For the best display of Dentists' work, to E. P. Worrall, \$2; for the best Hats of fur, silk or wool, to Wilson & Heed, \$2; for the best Cabinet work, to William Hoffman, \$3.

The above is but a meager report, sketched during the bustle of the Exhibition, and we hope that those whose contributions are not noticed, will excuse us.—We expect an official report will be published embracing all the contributions exhibited.

[Since the above was put in type we have received the official report, but too late to be inserted.]

Communications.

Improved Wire Fence.

MR. EDITOR:—Many different views and opinions have been given lately, both for and against the practicability of making wire fence for general farm purposes. In Lancaster county they have been generally condemned; sometimes from experience, but principally from the prevalent prejudice against all *new fangled notions*. Now, I have built several fences, rating good, bad and indifferent, but by perseverance I think I have at last got the mode of making wire fencing fully equal if not superior to post and rail, at but little more than half the cost. This I will endeavor to explain as clearly as possible, or at least give the general features of it.

I find the main cause of failure is, wire being too light and not strained up to sufficient tension, so that hogs

find no difficulty in pushing through between the wires, although cattle may be held. This was the case with my first fence made of No. 10 wire, posts 16 feet apart, at a cost of about 60 cents a panel (16 feet.) The best fence I have put up is along a public road infested by village cattle and hogs which are generally considered a pretty fair test, and I find it proof against any kind of farm stock whatever.—The fence has been in use for more than a year and is now as perfect as ever. My mode of construction is either to start from a good tree, or sink a very heavy post, well framed and braced, into a good sill 20 or 30 inches below the surface of the ground and secured so as to hold firmly against the strain of the wires without settling up. This is all important, as the strength of the fence depends greatly upon the ends. The posts are then planted 20 or 30 feet apart and the wires drawn along through half inch holes previously bored in the posts. I also string on every five feet a pine lath or picket for the purpose of stiffening the fence and preventing the wires being forced apart. After getting one or two wires through the whole length, I apply a small frame containing a crank and a pair of egg wheels to the end of the wire and strain it up to sufficient tension, say 6 to 800 lbs. to each.—While in this position we drive a pin or plug into the holes at every post. This in a measure prevents a recoil while securing the ends which is simply to coil it once around the post and wrap it several times very tightly around the main wire. This is the course pursued with every wire and the fence is completed.

One difficulty will generally be found in making joints of the several strands in a long line of a fence, if not very well made, they cannot bear the tension.—In fact, in all cases I find them the weak place of the fence, as I never yet could break a wire at any other place. The best joints I can make is to heat the ends red hot in a portable furnace so as to thoroughly anneal them, lay the ends together, parallel, andlapping 8 or 10 inches; screw on a couple of light hand vices with their jaws facing each other about 3 inches apart. The space between them is then turned into a close twist. Remove one vice and with a pair of stout pliers wrap the end very close and tightly around the main strand, the other vice is then removed and set further back (*on the joint*) and the other end served in the same manner coiling it in the opposite direction and of course around the other main wire. If the ends are not drawn around very closely they will slip or draw together, which at once breaks the joint, as one wire invariably twists off the other if they slip or give in the least; so that it is very important that the wires *lock* at once in fitting them together, and this cannot possibly be done without being thoroughly annealed.

A fence well put up in this manner will defy stock of any kind, and should cattle or horses accidentally run against it, the elasticity of the wire is sufficient to

throw them upon their haunches *without the least injury to the animal or fence*. Upon this account, the wire is better *unnanncaled*, as under a great force the pores of the iron will give in a measure, and the wire becomes slack, if softened. In fact, the bright wire works better in many ways, and is far preferable to put up. Number 8, I think as light as should be used for a *good* fence. Mine cost about one dollar and ten cents a panel of 20 feet, 4 feet high, or 9 strands, commencing 3 inches from the ground then 4, 4, 5, 5, 6, 6, 7, and 8 inches apart.

The advantages in plugging up the holes in the posts are, that it throws any unusual strain upon several posts at the same time, and in case a joint be broken the ends will not recoil for more than a few pannels, and can easily be repaired.

In giving the cost of this fence at \$1.10 for 20 feet, about the cost of good post and rail of 10 or 11 feet, you will of course understand the posts used are cullings and such as are too light to mortice, and consequently of not half the value of good sized posts.

Locust Grove Mills.

C. S. II.

*Notes by the Way Side,
Across part of Maryland and a portion of the Valley
of Virginia.*

May 5, 1851.

Leaving Lancaster for Baltimore about 12 o'clock, we reached Columbia where a snow storm welcomed us. Like ourselves it tarried but a little while, although on reaching York county, we found it to be two inches deep. Before we reached Baltimore, however, it had all disappeared.

In looking at the fine yards and gardens in the vicinity, we could not but be struck with the advance vegetation had made, and how much more forward it was than with us. We soon left for Washington, and on our journey thither, were surprised to find that little or no change had taken place in the agricultural character of the country between the two cities. Ten years ago, this was almost a barren waste, supporting a very thin coat of mere grass.—It is so still on the left side of the road, although, on the right hand were fine Wheat, Oats, Clover and Timothy. We arrived at Washington in good season; and as the dinner hour at the fashionable hotel at which we stopped, approached the supper hour of a Pennsylvania farmer, we found that we had since time to spare, which we devoted to a visit to the Patent Office. Free admission is given to all visitors. We could not but think, that the manner in which the thousands of beautiful models of invention were packed in the large cases, was not very well calculated to give the visitor a proper idea of their character. This difficulty will be obviated so soon as the new wings now being erected, are completed. The National Gallery in the same building is well worth a visit, and months might be pleasantly spent in an examination of the varied contents.

On Wednesday, May 7, we took passage on board the fine steamer Mount Vernon, for Richmond. We steamed it rapidly down the broad Potomac, and when some distance below Washington, the view of Washington, Georgetown and the vicinity was beautiful in the extreme. We arrived at Alexandria where the steamer tarried but a few minutes, brief as was our stay, we could see that the glory of this city had departed. The large empty warehouses and the few small vessels lying at the wharf, all gave evidence of a meagre trade.

A few miles below, the mansion of the Father of his country, was pointed out to us. As the boat neared it, the bell of the Steamer, as was the custom, was tolled, the tolling being continued until we had passed the sacred spot. Here the river widens, and except a few lonely dwellings on the high banks and the fishermens huts below, nothing of peculiar interest presented itself. On arriving at the Rail Road Depot at —— we saw a few knolls that gave signs of vegetation. Some luxuriant looking half grown peas and potatoes filled the garden, the soil of which was almost entirely sand.

We entered the cars, and proceeded through a pebbly country, skirted by abrupt hills on the one side and swamps on the other. In many places the original timber was still standing, but it was slim and scrubby. The finest lands had been cleared, and as is usual in Virginia, its fertility exhausted, and now abandoned and growing up with pines, sassafras, broom grass and blackberries.

On reaching Fredericksburg, the rusty looking brick mills and the woodwork without paint, satisfied us that here too the spirit of progress had departed. The farms in the vicinity are very large, generally from 3 or 400 acres to a thousand, and most miserably cultivated. There is little variation in the soil between Fredericksburg and Richmond, and except a few fine bottoms which are in a good state of cultivation. The soil is a sandy loam, without stones.— A large portion of the land was ploughed for oats and corn, although it had all been exhausted by the previous tobacco crops.

A farm of a thousand acres has no more stabling and storage for fodder, than a farm of 40 acres would have here; hay I have seen none, except from meadow and that stacked where it grew. Cornfodder is stacked in the same way. The ordinary houses are generally built of log, with wooden chimneys attached to the outside. Lime there is none in this section but what is brought from a distance of 40 to 60 miles; nature has supplied a strong red clay from 2 to 6 feet below the surface, which answers for ordinary plastering. At 5½ o'clock we arrived in Broad street in the city of Richmond, and in my next I will give a full description of it and its vicinity.

Lancaster, 1851.

D.

WEST CHESTER, June 14, 1851.

FRIEND SPANGLER:—Agreeably to your request and my promise, I send you the account of a SCALING LADDER, *verbatim et literatim*, published in the Gentlemen's Magazine, (London) for April, 1747.

I remain yours, &c. W. S.

Scaling or Pruning Ladder.

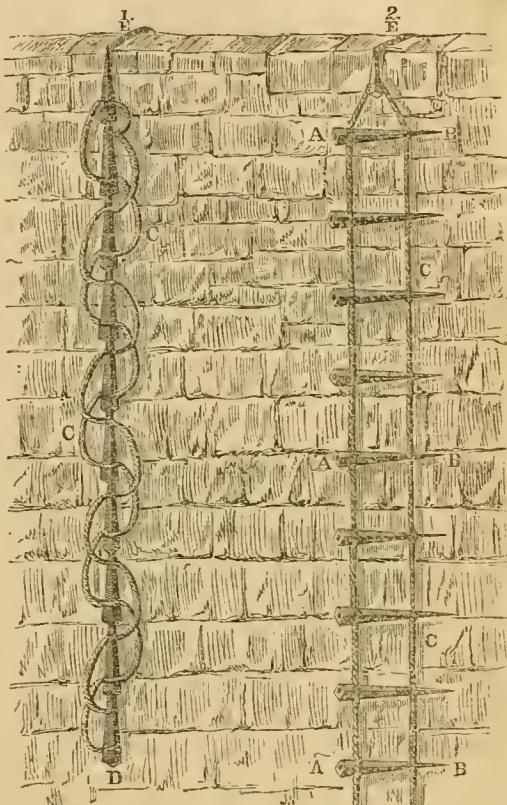


Fig. 1 and 2 represents a model of a scaling ladder, which may be useful on many occasions. Its rounds or steps A B are fastened at a proper distance from each with the cords C. These rounds are thicker at one end than at the other. The bigger end is made hollow like a fosset, and the small end is made to fit into it like a spigot so that by putting the small ends into the large they form the long pole D at the upper end of which is a great iron hook or holdfast E.

This pole being long enough to reach to the top of the wall, or place which is to be mounted, it is easy to fasten it by its hook E and there is nothing more to be done than to pull the lower end, that is the first round and all the rest will be drawn out the one from the other and your pole will be turned into a ladder.

These ladders are very convenient and are the more proper for secret expeditions, as they are very light, and may be put into a sack and removed from place to place without giving any suspicion that you carrying a ladder. It may be erected in the street or put out of a window to assist people to escape at fires; and probably may be improved by master Ephraim Haden who advertises his skill in rope ladders.

THE FARM JOURNAL.

Sub-Editor's Department.

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A. M. SPANGLER,
Lancaster, Pa.

CORRECTION.—In our last number our proof reader was not as careful as he should have been. Several errors crept in, amongst which were three or four in the article on agricultural education, by Mr. Gowen, which the reader will attribute to an oversight of the proof reader.

TALL RYE.—We were shown, a few days since, a number of stalks of rye from the farm of Mr. Konigmaeher, near Ephrata, in Lancaster county, which measured *eight feet and six inches!*

Premiums! Premiums!!

We observe by the Genesee Farmer, that our friend Jacob Frantz, of Paradise township, has been awarded the sum of twenty dollars, as a premium for the largest number of subscribers obtained by an individual. The number procured by Mr. Frantz, was 414, and it is due him to say, that this large list was procured before he was aware of the fact that the publication of the Farm Journal was contemplated. We are pleased to observe such liberal subscription on the part of our farming community, and would be glad to have them extend it in the direction of the Farm Journal. In order to induce them to do this, we offer the following terms to the Lancaster county Ag. Socieity, or any other county society in the State:

For 500 subscribers at our Club rates, at 75 cents each, we will pay a premium of Fifty dollars worth of Agricultural Books, for the Society's Library. The books shall be furnished at the publishers' lowest prices.

For any number of subscribers less than five hundred, but more than one hundred, we will pay a premium of ten dollars worth of Agricultural or other books, for each hundred.

For one hundred subscribers, whether furnished by an individual or a Society, a copy of Colman's European Agriculture, The American Farmer and Planter's Encyclopedia, (new edition) and a copy of Dixon & Kerr's Domestic Poultry.

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For Fifty subscribers, Colman's European Agriculture or the Farmer's and Planter's Encyclopedia.

For Thirty subscribers, Dixon & Kerr's Domestic Poultry and Youatt & Martin's celebrated work on Cattle.

For Twenty subscribers, either of the last named works.

The whole number of any of the above Clubs must be forwarded at the same time, with the Cash, the subscription to commence with the first of the volume. It is not necessary that the Club packages should be sent to any particular office. We will mail them to as many different points as desired.

As the above list of premiums is a far more liberal one than has ever been offered, we hope our friends will endeavor to secure them, and thus aid in extending our circulation.

How the New Postage Law affects us.

Although the Farm Journal cannot be sent free of postage through Lancaster county, the rates of postage will be so very low that no one will object to them. The postage for the whole year will be only *two and a half cents*, and to any portion of the State the whole year's postage will amount to only *five cents*.

Acknowledgments.

We acknowledge the receipt of handsome lists from the following gentlemen: Col. I. E. McCabe, Harriotsville, Allegheny co.; Benjamin Hood, Willistown, Chester co.; R. Wood, Clarksville, Greene co.; Joseph Kelly, Spruce Hill, Juniata co.; Jonathan Ely, Esq., New Hope, Bucks co.; Dr. J. K. Eshleman, Downingtown; Israel W. Morris, Philadelphia; James Gowen, do.; E. E. Kinzer, West Hanover, Dauphin co.; A. McAlister, Springfield Furnace, Huntingdon co.; E. Schley, Esq., Frederick, Md.; George W. Patton, Union Furnace, Huntingdon co.; L. Burchfield, Mifflintown; Jacob Heyser, Chambersburg; Christian H. Lefever, Strasburg, Lancaster co.; Benj. B. Herr, do.; Hon. Luther Kidder, Wilkes-Barre; Charles Belding, do., three clubs; Thomas F. Croft, Philadelphia; James Thornton, Byberry, Philadelphia co.; J. R. McMillen, Somerset co.; John E. Shaffer, Elizabeth, Allegheny co.; Hon. Geo. Taylor, Huntingdon; N. Amory, Nagadoches, Texas; Jacob Mast, do., do.; Joseph Wickersham, Lewisburg, York co.; Col. J. H. Murphy, Mercersburg; Isaac Markley, Norristown; J. M. McMinn, Unionville, Centre co., a very handsome list; J. B. Garber, Mountville, Lancaster co.; George Morrison, Chestnut Level, Lancaster county.

Enterprise of English and American Farmers.

The New Jersey Medical Reporter refers to the discovery at Hurdstown, Morris county, by Dr. Jackson of Boston, of a rich bed containing 92 4-10 per cent. of pure phosphate of lime, yielding 46 $\frac{1}{4}$ per cent. of phosphoric acid and 20 per cent. of phosphorus.

In connection with the above we learned a few days ago that not an ounce of this valuable fertilizer has been applied to American soil; but that ship load after ship load has been sent to England to enrich her lands. Is not this a fact that should arouse our farmers to a true sense of the value of these phosphates? The English agriculturists understand and fully appreciate them, as is evidenced by the fact above mentioned.

From the same source we learned that almost every bone gatherer in our large cities, is an agent of some English company, and it is next to an impossibility to procure a ton of bones for any consideration, this side of the Atlantic. Bones for the English market have been gathered from the very interior of our State and sent to Philadelphia by canal. And now a question of deep importance suggests itself.—If the phosphates of New Jersey and the bones gathered in various parts of the United States, can be shipped to England, a distance of three thousand miles, and yet be considered highly profitable fertilizers, should not American farmers avail themselves of the opportunity afforded them of enriching their lands, when the material in abundance is at their very doors? We pause for a reply.

A voice from the West.

Although not written for publication, we take the liberty of making a few extracts from a letter written to the Editor by Dr. John C. Kennicott, of The Grove, Northfield, Illinois. It will be remembered that Dr. K. is one of the ablest friends of agriculture in the West, and commendation from such a source is certainly flattering:

EDITOR OF THE FARM JOURNAL—*Dear Sir*—I thank you for the three numbers of your new Pennsylvania paper, and assure you, that I feel the compliment contained in your request. But sir, I am an unlettered farmer—born in a log house, and sooth to say, occupy one yet, notwithstanding the M. D. attached to my name. That title came by chance, and necessity, rather than choice,—and yet I am not a little proud of it; for medical men are taking an honorable lead in the art and science of modern agriculture, and especially horticulture. This is the natural consequence of their love of all the works of nature, and their especial study—**THE LAWS OF VITALITY**.

Up to the present day, if a poor young farmer felt a desire to enquire into the operations of nature, and to gather some available notions of science, (which ought to be as familiar to all who own farms, as the history and principles of our religion to those engaged in its ministry,) there was no source, so accessible to his means as medical colleges. Success to “the schools of medicine;” and may many of the principles taught therein, soon find their way to the “public schools” of the country.

To say that I am pleased with these specimens of your new enterprise, in an old field, would be saying too little—I am more than pleased—I am gratified and encouraged—I like the **TOKE** and **CHARACTER** of your journal. It may be only that it is fresher, and therefore makes a newer impression; but to my mind, there certainly appears to be a straight-forward boldness—full of truth and meaning—on subjects connecting the progress of agriculture with the stand-still policy of legislation—a very little ahead of some of the old agricultural papers—and among your correspondents I recognise some of the most reliable pens in the country. God speed you.

The Keystone State has been rather tardy in establishing a permanent agricultural journal; but you seem determined to make ample amends for the delay, by going strait to the root of the matter at once, and advoeating the only true, liberal and legitimate plan, promising certain, permanent and universal results, commensurate to our necessities and our desires.

General and particular agricultural organization, and specific and universal agricultural education, are the true points on which hinge the perfection of agriculture as a science, and the intellectual elevation, general prosperity and happiness, conventional standing and political influence of over “three-fourths of the people” of this great nation.

A Visit to West Chester.

To the exclusion of much other matter, we publish the proceedings of the Horticultural and Industrial Exhibition at West Chester. Having frequently heard of the interesting and instructive character of these Exhibitions, we visited West Chester on the 12th and 13th of June, for the purpose of ascertaining whether the glowing accounts we had heard were not somewhat exaggerated. To our surprise and extreme gratification, we found them all they had been represented.

The Exhibition was held in the Horticultural Hall, a splendid building erected expressly for the purpose, and evincing in its structure both liberality and taste. The arrangement of the Hall is such as to display every thing to the best advantage, and we could not but admire the elegant taste evinced by the enterprising managers in the arrangement of the articles for Exhibition. Every thing was in perfect and harmonious order and the effect produced remarkably pleasing.

The interest manifested by the citizens of Chester and the adjoining counties, was highly encouraging to the Society. The large Hall was crowded with delighted visitors from an early hour in the day, until late at night, and thus for three successive days.

Combining, as these Exhibitions do, the Industrial with the Agricultural, all classes of the community are interested in their success. The consequences are,—they are largely attended—the display of skill, ingenuity and taste is extensive and varied, and the effect produced upon the mind of the visitor far more pleasing and instructive, than where the products of only a single class are exhibited. Why should not every county in the State boast similar enterprise? Why should not Lancaster with her hundred thousand inhabitants, and Berks and York, Dauphin and Cumberland, and many others? There is no good reason why the laudable energy and taste of the people of Chester County should not be followed in three-fourths of the counties of Pennsylvania.

We cannot close this article without thanking the Managers of the Exhibition for the gentlemanly courtesy extended to us. Our visit to West Chester was one of pleasure and profit, and as such will long be remembered.

Extensive Agricultural Warehouse.

Paschall Morris & Co., of West Chester, have recently erected a large and elegant warehouse, where may be had all the improved agricultural implements of the day. In connection with the warehouse is one of the best nurseries in the State, under the superintendance of Mr. Morris, whose practical and scientific skill as an agriculturist is conceded by all who know him. Any of our readers desiring fine plants, fruit, shade and ornamental trees will be able to procure them at this establishment either by personal selection or written order.

Guano.

We are pleased to find our farmers giving attention to guano as a manure, and earnestly hope there may be a more general use of it in Pennsylvania. In some of our eastern and southern counties a considerable number of enterprising farmers are using it upon a large scale with marked success, and many others are experimenting with smaller quantities. In York county, we understand, the judicious application of it has resulted in bringing many of the thin lands in the southern part of that county into fine condition; the harvest promising as richly there, as in the most fertile limestone regions. This is certainly very encouraging, and will, we hope, open the way for its more general introduction. To aid in bringing about so desirable a result, we earnestly request those gentlemen who have used guano, to give us the benefit of their experience, in order that we may present the subject in its true light to our readers.

Many of the failures in the use of guano, are attributable to the impositions practised upon purchasers by the dealers. An adulterated article is sold for the genuine, and few but skilful chemists will detect the imposition. The best plan is, therefore, to deal with persons whose integrity can be relied upon. The advertisements of three such will be found in this number, and we take pleasure in commanding them to the attention of our readers.

The Crops in Pennsylvania.

As a general thing the crops of Pennsylvania never promised finer. At present writing, June 26, the weather for hay making is, and has for several days past been very propitious. The grass is very heavy and the hay well cured. The grain could not be better. In some counties violent storms have beaten it down, but this is not generally the case. The coolness of the early part of the season has retarded the corn, though the genial showers of the past few days, with the fine summer weather we now have, will bring it on rapidly. We hear that harvest hands are scarce, in many sections, and that the grain and grass reaping machines will be more extensively used this harvest than ever before.

Brevity.

As the number of our correspondents is rapidly increasing and we are very desirous to give our readers as great a variety as possible, we have to request that correspondents will be kind enough to make their communications as brief as they can, consistently with the character of their subjects. We make this request for another reason. The great object contemplated by the Farm Journal being the dissemination of valuable agricultural information, it becomes important that the articles be of moderate length, in order that our weekly newspapers may copy them without inconvenience. Short articles are more generally read than long ones, and consequently more generally useful.

Attention to Young Cattle.

The essential requisite to perfection in an animal is generous and careful feeding from its birth. Many farmers neglect their young cattle and expect to repair the neglect by over feeding when fattening for market. This is a gross error. The constitution of young animals suffer severely from hard fare, and the farmer who neglects his yearlings, will never succeed in rearing as fine cows and oxen, as he that from the hour of their birth gives his stock his careful attention and provides good feed in suitable quantities, and comfortable shelter from the inclemencies of the weather. By careful attention we do not mean unnatural forcing, as this is frequently as prejudicial as neglect, but a kind, generous, judicious treatment which keeps the animal continually thriving.

LANCASTER, JUNE 23, 1851.

MR. SPANGLER—I send you herewith a stalk of Coad wheat, which was raised in St. Mary's county, Md., from a specimen obtained from the Patent office. It was presented to me on the 19th inst., by Mr. Sands, editor of the American Farmer, Baltimore.

Mr. S. informed me that he travelled nearly one hundred miles to see a field of one hundred acres in which it grew. It is judged the whole field will average forty bushels per acre.

The valuable qualities of this wheat are: its remarkably well filled head, together with a stalk of uncommon thickness, amply able to sustain it. It has a strong resemblance to a kind called Sool's wheat, which was introduced in the Gennesse country in 1845, although somewhat different in appearance; the Sool's wheat had no beard and was lighter in the straw. On good land it would yield thirty or more bushels to the acre, while it seldom lodged, the straw being very strong in proportion to its height.

Our farmers while harvesting their prostrate wheat this season, will probably see the necessity of introducing something of this kind.

Respectfully yours, SAMUEL PELTON, Jr.

[The sample above referred to, may be seen at W. H. Spangler's Book Store, North Queen street, Lancaster.—*Ed.*]

Circular.

We have received "a Circular expressive concisely of the objects, advantages and claims of the Pennsylvania Horticultural Society." After enumerating the *general* benefits which have resulted to the community in the great improvement of vegetables, fruits, flowers, &c., the new varieties introduced, the improved intelligence of gardeners and nurserymen, &c., the circular concludes with the following claim:

The only claim that will at present be set up in behalf of the Society is, that all who approve of and would perpetuate and extend the objects and advantages herein represented and alluded to, should, with-

out delay, be numbered among its contributing members—which may be done by application one month prior to admission, at an expense of three dollars annually, or twenty-five dollar for life. A further inducement to admit and discharge this claim, by an early application for admission to membership is, that in addition to the ordinary privileges granted, the members are allowed, both at the hall and at home, the free use of the library (embracing the best works on almost every scientific and useful subject,) and that each member is allowed free tickets of admission for two ladies and himself, to the annual and all the monthly exhibitions and business meetings of the Society, which, independently of all other considerations, should be deemed more than equivalent to the small contribution required.

Delaware County.

We are glad to learn that an enterprise well calculated to advance the agricultural and manufacturing prosperity of Delaware and Chester counties, is undertaking by their citizens. It is proposed to make a Rail Road from West Chester to Philadelphia, passing through the heart of Delaware county. The want of a more direct communication with Philadelphia, has long been felt, and by the want of Delaware county. The superior dairying advantages possessed by Delaware county, should induce the Philadelphians to lend vigorous aid to the undertaking.

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GUANO WARE HOUSE,

No 54, South Wharves, Below Walnut Street.

PERUVIAN and Patagonia Guano, for sale in large or small quantities, in barrels and bags, on reasonable terms.

JOSEPH L. JONES,

No. 54, South Wharves, Philadelphia.

Analysis Phosphate of Magnesia 45.4

Carbonate of Magnesia 1.7

Alkaline Salts 0.6

Organic Matter 26.6

Ammonia 2.8

Water 16.4

Sand &c. 6.2

"The 45.4 parts of Phosphate of Magnesia contains 28.75 parts of Phosphoric Acid. The guano is of excellent quality, containing nearly one half of matter of the highest value in Agriculture, besides one fourth of organic matter in a good state for application to the soil."

Result of an analysis of a lot of Patagonia Guano in Store, and for sale by

JOS. L. JONES.

No. 51, South Wharves, Phila.

GUANO,

PERUVIAN and Patagonia Guano for sale in lots to suit pur-

chasers, by J. CASSIDY & SON.

No. 121, South Water st., a few doors above Dock st., Phila.

July 1. 4-1y.

BERKSHIRE PIGS and South Down Sheep of Pure Blood, for sale by JAS THORNTON, Jr.,

July 1-6m. Byberry, Philadelphia Co.

GUANO AND PLASTER.

THE subscribers offer for sale at the lowest market rates,

1000 Tons Dry Patagonia Guano.

500 " Government Peruvian Guano.

500 bbls. Ground Plaster.

The quality of the above is unsurpassed, and can be recommended with confidence to farmers and others in want of the articles. A liberal deduction made to Country Merchants.

ALLEN & NEEDLES.

No. 22 & 23, S. Wharves, First Store above Ches. st., Phila.

July 1. 4-7m.

TO FARMERS :

LANPHIER & GORRECHT

RESPECTFULLY invite the attention of Farmers and others to their Establishment for the manufacture of Farming Implements and especially to their celebrated

IMPROVED GRAIN FANS,

which they confidently assert will do more work in a shorter space of time, and with less labor, than any other Fan now in use. These Fans wherever introduced, have given complete satisfaction, and a large number of testimonials could be procured, testifying to their superior merits.

They also manufacture, to order, Agricultural Implements of various kinds: such as Straw Cutters, Cultivators, Ploughs, Harrows, &c.

Having had many years' experience in the best shops in the country, they are prepared to do work of a superior quality a little cheaper than any other establishment in the State. They will warrant all their work to be what it is represented. A warrant given with every Grain Fan, giving the purchaser the privilege of returning it, should it not do good and quick work.

They will deliver them, free of expense, any distance within fifty miles of the manufactory. Their Shop is at the junction of the Marietta and Columbia Turnpike, Lancaster, Pa., where they will be happy to have Farmers call and examine for themselves.

Price of Fans, No. 1, large size, \$21.00

" " 2, small size, 29.00

Several good and responsible Agents wanted in the Western and Middle part of Pennsylvania, to whom a fair percentage will be allowed. All orders addressed to Lanphier and Gorrecht, Lancaster Pa., will meet with prompt attention.

June 1-1f.

FARMERS.

IF YOU have Horses that have been injured by sprains, Ringbone, spaying or wounds of any kind, you can cure them up and make them as valuable as they ever were — Send one dollar free of Postage to the subscribers and they will send you four valuable receipts.

You may depend upon it, that the articles thus manufactured and will cure — and that any one of the receipts is worth more than you will have to pay for all of them. Address (Postage paid.)

June 1, 1851. HILLIS & CLARK, Elmira, Chemung co., N.Y.

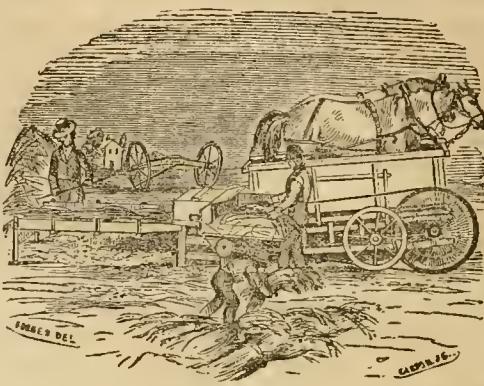
HENRY L. TRIPLER,

(Successor to Joseph P. H. Coates.)

Dealer in Grass and Garden Seeds.

No. 49, Market Street, Philadelphia.

Harrisburg Agricultural Machine Shop.



M STEEVER & CO.

HAVE recently establish'd a Shop for the manufacture of Wheeler's Patent Horse Powers and Threshers, with Separators; also, Clover Cutters, Feed Cutters, Corn Shellers, Grin Drills, Circular Saw Mills, &c.

These Horse Powers and Threshers are favorably known wherever they have been used or exhibited. They have taken premiums at many different State and County Agricultural Fairs, in different States in the Union, and also in Carolina, never having competed for prize unsuccessfully.

The accompanying Cut gives a side view of a Two-Horse Machine at work, with the hands necessary to attend it, and keep it in full operation, and will thresh from 100 to 200 bushels of Wheat, or thrice that quantity of Oats, Buckwheat or Barley, per day. — The One-Horse or Single Machine will thresh half as fast as the double ones.

THE OVERSHOT THRESHER takes the grain from a level feeding table (of a proper height to allow the feeder to stand erect and feed without annoyance from dust,) by means of the Separation. The Straw, as it comes from the machine, is thoroughly separated from the grain.

PRICES AT HARRISBURG.

For Two-Horse Machine, \$140.00

" One-Horse Machine, \$116.00

Every Machine made and sold by them or their Agents are warranted to give entire satisfaction to the purchaser, or it may be returned to them after fair trial, and the purchase money (if paid) will be re-imbled. These Machines will also be manufactured at the Borough of Lebanon and after the 1st of July. Five per cent. will be discounted on the above prices if paid within ten days. Orders respectfully solicited.

M H STEEVER & CO., Meadow Lane, between 2d and 3d st., Harrisburg, Pa. 1-1f.

R. BUIST,

NURSERYMAN & SEED GROWER,

HAS always on hand at his seed Store, 97 Chestnut Street, Philadelphia, a large stock of Seeds of his own growth, a very important item to purchasers, as he is a practical grower, and has been engaged in his profession over 30 years. His nursery ground is amply stocked with Fruit Shade and Ornamental Trees, accurately named and properly cultivated. Every article sold at the lowest rates and warranted to be as represented.

Seed Store, 97 Chestnut Street, Philadelphia. Nurseries and Seed Farm, Darby Road, two miles below Gray's Ferry. June 1, 1851.

R. BUIST.

Life Insurance for Horses, &c.

THE American Live Stock Insurance Company, (Stockholders individually liable) for the Insurance of Horses, Mules, Prize Bulls, Sheep, Cattle, &c., against Fire, Water, Accidents and Disease. Also, upon Stock driven to Eastern markets, or transported South.

JOHN H. FRICK.

General Agent for Pennsylvania, Philadelphia.

REFERENCES :

Wood, Abbott & Co., } Philadelphia.
Truitt, Brother & Co., } Philadelphia.
Coates & Brown, }

Agents:

JOHN ZIMMERMAN, Lancaster, Pa.

CHARLES F. FRICK, Reading, Pa.

SAMUEL H. TAYLOR, March Chunk, Pa.

Dr. JOHN G. SCOVEN, Veterinary Surgeon, Examiner for Lancaster County, May, 1851.

**Chester County Agricultural
WAREHOUSE & SEED STORE,
High Street near the Horticultural Hall,
WESTCHESTER, PA.**

THE subscribers in connection with their extensive Nursery Garden, and Green House establishments, have erected a large Warehouse, and will keep constantly on hand and for sale, a complete assortment of *Agricultural and Horticultural Implements*, consisting, in part of Horse Powers and Threshers, Plows of different sizes and patterns among which are the celebrated "Eagle Self-sharpening," Prouty & Mears' Centre Draft, Subsoil, Sidehill, &c. &c., Harrows, Cultivators, Wheat Drills, Seed Sowers, Corn planters, Fanning Mills, Corn shellers, Straw and Hay Cutters, Churns of various sizes and patterns, Harvesting tools of every description; in a word every implement necessary to the Farmer and Gardener, and of the most approved kinds and patterns can be had at our Warehouse. Also, field, grass, and garden seeds of every variety.

At our Nursery will be found our usual large assortment of Fruit and Ornamental Trees, Straberry, Grapes, Greenhouse Plants, &c., &c.

PASCHALL MORRIS & CO.

Westchester, Pa., June 1, 1851.

**DIXON & KERR'S
POULTRY BOOK.**

JUST PUBLISHED,

A TREATISE ON THE HISTORY AND MANAGEMENT OF ORNAMENTAL AND DOMESTIC POULTRY. By Rev Edmund Sul Dixon, A. M., with large additions, by J J Kerr, M. D. Illus trated with SIXTY FIVE portraits, from nature, engraved expressly for this work.

CONTENTS.

The Domestic Fowl.

The Rearing and Management of Fowls.

Eggs—Their Color, Form and Sex.

Eggs—Their Preservation for Culinary Purposes.

Eggs—Their Preservation for Incubation.

Varieties of the Shanghai Fowl.

The Cochin China Fowl.

Burnham's Importation of Cochin China Fowls.

The Malay Fowls, sometimes (though erroneously called Chittagong).

The Pheasant—Malay Fowl.

The Guelderland Fowl.

The Dorking Fowl—Colored Dorkings.

The Spanish Fowl.

The Game Fowl—The Mexican Hen Cock Game Fowl.

The Chittagongs, The Java, The Shakebag, and the Jersey Bue Fowls.

The Poland or Polish Fowl.

The Spangled Hamburgs—Tho Bolton Greys or Creole Fowls.

The Rumpless Fowl, the Silky and Negro Fowls, the Frizzled or Friesland Fowl, the Cuckoo Fowl, the Blue Dun Fowl, and the Lark-crested Fowl.

The Smooth-legged Bantam.

The Dung-hill Fowl, the Dominique Fowl, Colonel Jacques' Chicken Coop, Devereux's Method of Rearing Chickens without a Mother, and Coope's Letter on Early Chickens.

Caponizing Fowls.

The Pea Fowl.

The Ring-necked Pheasant.

The Turkey.

The Guinea Fowl.

The Mute Swan (*Cygnus Olor*).

The Wild or Canada Goose.

The Domestic Goose.

The Hong Kong or China Goose.

The Bremen Goose.

The White-fronted or Laughing Goose.

The White China Goose.

The Bernicle Goose—The Brent Goose.

The Tame Duck.

This work is well bound in muslin, and is printed on the finest paper. The illustrations are engraved in the most elegant manner, from original and accurate drawings, and the whole is one volume of 480 pages duodecimo, price \$1. A few copies have been colored after nature. Price for the colored copies, \$2.50. For sale by all Booksellers, and by the Publishers.

June 1-3

23 Mifflin Street, Philada.

PHILADELPHIA & LIVERPOOL LINE OF PACKETS—To sail from Philadelphia on the 15th, and from Liverpool on the 1st of each month.

From Phila.	From Liverpool.
Ship SHENANDOAH	April 15th
Capt. W. P. Gardiner.	Aug. 15th
	Oct. 1st
New ship WESTMORLAND	Dec. 15th
Capt. P. A. Decan,	May, 15th
	July 1st
New ship SHACKMAXON,	Sept. 15th
Capt. W. H. West.	Jan. 15th
	Mar. 1st
Ship MARY PLEASANTS,	June 15th
Capt. R. R. Decan,	Oct. 15th
	Dec. 1st
	Feb. 15th
	April 1st
	July 1st
	Sept. 1st
	Nov. 15th
	Jan. 1st
	March 15th
	May 1st

The above first class ships are built of the best materials, and commanded by experienced navigators. Due regard has been paid to select models for speed with comfort for passengers. They will sail punctually on the days advertised, taking advantage of the steam tow boats on the Delaware.

Persons wishing to engage passage for their friends, can obtain certificates, which will be good for twelve months.

Passage to Liverpool in the cabin,	\$80
" " Forward cabin,	20
" " Steerage,	12
Passage from Liverpool in the cabin,	100
" " Forward cabin,	23
" " Steerage,	20

Those who wish to remit money, can be accommodated with drafts for £1 sterling and upwards, at sight, without discount. Apply to **GEO. McHENRY & CO.**

June 1, 1851.

37 Walnut street.

JOHN H. SMITH'S

RENOVATING OINTMENT & HORSE RENOVATING POWDERS.

THE author of our existence has caused to grow up spontaneously, throughout the world, such vegetable properties as will at once cure, when properly applied, all curable diseases. The proprietor of these truly valuable Medicines might fill a volume, with Certificates and Testimonials in favor of his articles; but considering such puffs wholly useless, since they are so readily manufactured, and do use of to such an extent to palm off some useless trash upon the public. I shall, therefore, state at once, the various diseases that can be speedily cured by these invaluable Horse Renovating Powders, viz.—Glanders, Hidebound, and Horse, Distemper. It also carries off all gross humors, and purifies the blood. It is also a safe and certain cure for the Heaves; it will also cleanse, at once, the stomach and bowels from bats, worms, &c. and again restore the stomach and bowels to healthy action.

SMITH'S RENOVATING OINTMENT is an invaluable remedy for horses, in the cure of the following diseases: Fresh Wounds, Galls of all kinds, Sprains, Bruises, Ringbones, Poll, Evil, Wind Galls, Spavins, Sweeny, Fistula, Strains, Lameness, Founder'd Feet, Cracks, and Scatches.

The above articles are to be had in most of the Cities and principal Villages throughout the United States, and the Canadas.

For sale, wholesale and retail, at John H. Smith's Depot, No. 123 Fulton street, (2d floor,) New York.

Price, 25 cents per box for the Ointment; 50 cents for the Horse Renovating Powders. For sale by **DR. ELY PARRY,** April—on

East King street, Lancaster, Pa.

The BEST and MOST VALUABLE Agricultural Implements & Machinery

Exhibited at the State Fair in 1850, will be seen by the award of Premiums below:

AWARDED TO E. WHITMAN, JR.,

55 Light Street, Baltimore, by the Maryland State Agricultural Society,

At their 3d Annual Fair, held in Baltimore 23d, 24th and 25th October, 1850.

For the best Plow in the Plowing Match, the Prouty & Mears No 5	\$40 00
For the best Plowing with Ox Team, same plow, (Special Premium)	2 00
For the best Plow on Exhibition, Ruggles, Nourse, Mason & Co's No. 3. 1st Premium.	8 00
For the best Railway Horse-power, Whitman's Improved, 1st Premium,	15 00
For the best Hay Press, 1st Premium,	25 00
For the best Cornsheller, 1st Premium,	4 00
For the best Field Roller, 1st Premium,	8 00
For the best Corn-Stalk Cutters and Grinders, 1st Premium,	5 00
For the best Churns, 1st Premium,	4 00
For the best Hay and Manure Fork, 1st Premium,	2 00
For the best Hay Rakes, 1st Premium,	2 00
For the best Cultivator, 1st Premium,	4 00



Highland Nurseries, Newburgh N. Y.

A. SAUL & CO. beg leave to call the attention of *Dealers* and *Planters* of Trees, and the public in general, to their very large and complete stock of **FRUIT AND ORNAMENTAL TREES**, which they offer for sale the coming spring. The trees of these Nurseries are all grown on the premises, and propagated under the immediate supervision of Mr. Saul, whose long connection with this establishment, is some guarantee for the accuracy of the stock now offered for sale. It consists in part of over

20,000 Pear Trees, 5 to 8 feet high, and embracing all the leading Standard Varieties, as well as those recently introduced, of merit, either of American or Foreign origin.

20,000 Apple Trees, of *Extra size* 8 to 10 and 12 feet high, including every variety worthy of cultivation.

10,000 Plum Trees, 5 to 8 feet, of every known kind of reputation, as well as all the novelties of recent introduction.

10,000 Cherry Trees, 6 to 8 feet and over, among which will be found all the desirable and choice varieties.

A large stock of handsome, well grown trees, of Peach, Apricot, Nectarine and Quince, in every variety. Also,

Grapewines, Native and Foreign; Raspberries, Gooseberries and Currants. Strawberry Plants and Esculent Roots, such as Asparagus, Rhubarb, Seakale, &c., of the most approved kinds.

Pear and Quince, Cherry on Mahaleb, and Apple on Paradise stocks—for Pyramids or Dwarfs for garden culture, and embraces all the kinds that succeed on those stocks.

Deciduous and Evergreen Ornamental Trees and Shrubs.

100,000 Deciduous and Evergreen Ornamental Trees, embracing all the well known kinds suitable for street planting of *extra size*; such as Sugar and Silver Maple, Chinese Ailanthus, Horse Chestnut, Catalpa, European and American Ash, Three Throned Acacia, Kentucky Coffee Tree, Silver Ash, American and European Elm, in several varieties, &c. Also all the more rare and select, as well as well known kinds suitable for Arboreta, Lawns and door-yard planting, &c.; such as Doeder and Lebanon Cedars; Araucaria or Chilean Pine; Cryptomeria japonica; the different varieties of Pines, Firs, Spruces, Yews, Arborvitae, &c.

WEEPING TREES—New Weeping Ash, (*Fraxinus lenticellata pendula*) the Old Weeping Ash. Weeping Japanese Sophora, Weeping Elms, (of sorts) Umbrella Headed Locust, Weeping Mountain Ash, Weeping Beech, &c., &c.; together with every variety of rare Maple, Native and Foreign; Weeping Pea andmond and Cherry; Chestnuts, Spanish and American; Toms sage Copper Beech; Jndss Tree, Larch, Gum Tree, Tulip Tree, Orange, Paulownia. Mountain Ash, (American and European) Magnolias of sorts, with many other things— including some odd varieties of Shrubs, Vines, &c., for which see Catalogue, a new aidition of which is just issued, and will be forwarded to all post p applicants.

A large quantity of Arborvitae for Screens, and Buckthorn and Osage for Hedge plants.

The above will be sold on as liberal terms as similar stock can be purchased elsewhere. For further particulars we would again refer to priced Catalogue. A liberal discount will be made to persons who buy, to sell again, and extensive planters, on their own account.

Seed and Agricultural Warehouse,

19½ Market Street, Philadelphia.

WE offer to our friends and customers, the largest assortment of Agricultural implements, Garden tools, and Seeds, ever offered in this Market, consisting in part of the following, viz.:—Prouty and Mears' Patent highest premium self-sharpening Ploughs, right and left handed side hill Subsoil, of various sizes, of superior materials and workmanship, warranted to give satisfaction, or the money returned—Four highest premiums awarded to these Ploughs at the New York Fair, 1850. Also, Beach and Car Share Ploughs; Spain's improved Barrel Churn, constructed in such a manner that the dasher may be removed from the inside of the Churn by simply unscrewing the handle from the dasher. Hay, Straw and Corn-stack cutters, in great variety, among which may be found Hovey's superior premium straw-cutter, of every size.

Also, Horse-power Threshing Machines. Fan Mills, Corn Shellers, Cheese Presses, Seed Planters, Dirt Scrapers, Sugar Mills, Ox Yokes and Bows. Turnip Drills, Horse Rakes, Swather, Seythes, Concaved Hoes, Spring Tempered Cast Steel, Oval and Square Manure and Hay Forks, Pruning Shears and Chisels. Beach and Car Share, repairing pieces and castings. Peruvian, Patagonia and prepared Guano, together with a complete assortment of grass, garden and field seeds, all of which will be sold at the lowest possible prices, at 19½ Market street, Philadelphia.

April 9—tf

PROUTY & BARRETT.

IMPORTANT TO FARMERS

And Threshing Machine Makers.

THE subscriber respectfully begs leave to inform the public that he has lately perfected a new Threshing Machine and Horse Power, which in point of strength, durability, lightness of draught and convenience in moving is not surpassed or equalled by any Machine in the United States; he also confidently affirms that no Machine of its strength and durability can be afforded as low—The invention of this Machine has been the result of several years experience and hard study. We do not claim to have discovered any new principle in philosophy—but we do claim to have discovered a plan by which old philosophical principles are more correctly and advantageously applied than on any other Machine. This invention is secured by a caveat.

These Machines can be had at Israel W. Gross's Machine Shop and at Prime & Colestock's Sash Factory in North Duke street, Lancaster city, at retail or by wholesale on the most reasonable terms.

The Power weighs 600 pounds. It is made entirely of Iron with Steel Journals, and is warranted to hold 8 Horses should it any time be necessary to use so many. From 2 to 4 Horses are a sufficient number for common threshing. We are about getting up one much lighter for Shop purposes that will be the cheapest and most convenient thing in use; it might also be used with 2 or 3 Horses for threshing; the Powers and Cylinders and Concave can be had by the Machine makers throughout the country on the most reasonable terms.

All orders directed to the subscriber at Lancaster city will be thankfully received and promptly attended to.

Lancr, April

SAMUEL FELTON, Jr.

Gilmore's Bee-Hive, &c.

THE attention of Bee culturists is invited to this improved plan.

Mr. Gilmore is a gentleman of great experience and success in the culture of Bees; his improvement is the result of many years trial; his result has no parallel in the history of the past.

The Agent of the "Pennsylvania Farm Journal" is the Agent of Gilmore's System of Hiving and Feeding the Bee in this State.

The price of a Hive and Fixtures, \$3.00
Township Rights from \$10 to \$20.

County " " " \$30 " \$20.

" " " " " Family Right, \$3.00
A Talk about the Honey Bee," a defence of Gilmore's system, contains also, testimonials, awards of Premiums to Gilmore, from the leading Fairs and Institutes in this Country; 12 cents single; \$1.00 per dozen—gratis to pstrons.

Circulars sent to any applicant. Address, post paid,

J. B. MAYNARD.
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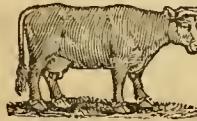
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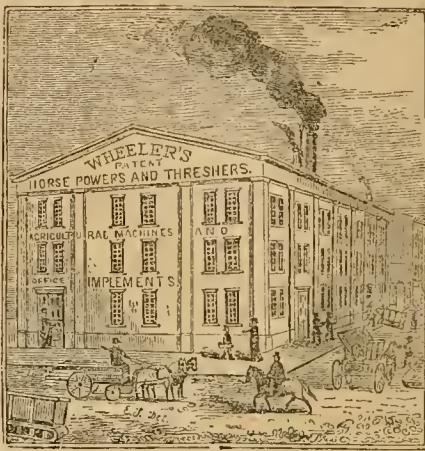
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April—11

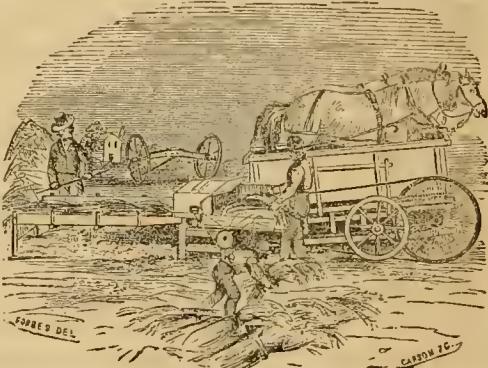
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PENNSYLVANIA FARM JOURNAL

VOL. 1.

LANCASTER, PA., AUGUST, 1851.

NO. 5.

THE FARM JOURNAL.

S. S. HALDEMAN, Editor.

Entomology, No. 4.

BY THE EDITOR.

ERIOSOMA LANIGERA—(by some named *Eriosoma mali*.)—This destructive enemy of apple trees is known as the *American blight* in England, where it is believed to be of American origin—erroneously in the opinion of Dr. Harris (*Noxious Insects*, p. 193). From its numbers, and the extent to which it is spread, in Europe, that seems more likely to be its native country. Here it is still comparatively rare, and Dr. Harris having seldom seen it in Massachusetts.

The generic name *Eriosoma* means *woolly body*, and the trivial name *lanigera* means *wool-bearing*, the insect having been considered an *Aphis* by Hausman, a German observer, who named it *Aphis lanigera* in 1801. Plot, a French observer, gave it, in 1830, the

French name of *Myzoxyle du pommier*, the first name meaning *wood sucker*, and the last of *the apple tree*, and some authors have attempted to give a latinised form of this priority over the regular scientific name of *Eriosoma*.

Apple trees may be entirely destroyed by this insect, and its progress is so gradual and its presence so likely to be unobserved, that it may be pretty widely spread before the cultivator is aware of its presence.

The small and more tender branches of the tree are chiefly attacked, presenting unsightly wounds, as if the bark had been cut off in spots or strips, and grown over and partly or entirely healed, whilst twigs will be bent and distorted. An examination will disclose little white masses apparently of wool, cotton, or cobweb, as in *Fig. 1*, which represents

an infected branch from one of our own trees. If the woolly mass is examined, it will be found to arise from the body of a colony of small oval wingless in-

sects less than the tenth of an inch long, with younger individuals down to one-fiftieth of an inch in length. *Fig. 2*, is a magnified view of the insect, with an antenna and the rostrum on the right. The natural color of the insect is reddish,



Fig.

with the segments distinct, the antennae are short and generally inclined outwards and backwards, the feet weak and slender, and the rostrum more than half the length of the body, apparently three jointed, and adapted for piercing the bark.

The young individuals have but little wool, but it grows with its growth, especially upon the posterior part of the body, so that they are finally entirely covered with it, a colony presenting nothing but a mass of wool, which is often half an inch thick.—They are sluggish in their motions, young and old generally remaining quietly attached to the place upon which they are located, with their rostrum stuck in the bark.

These insects are easily wafted upon their downy covering from tree to tree by the wind. Some observers say that they never acquire wings, whilst Plot, already alluded to, says that the males have them. These are found in autumn, and are smaller than the females.

When the *Eriosoma* gets old, it loses most of its down and gets a more sombre color. Dead ones of a black color are frequently found fastened to the branches, and in many cases a small perforation may be seen upon the upper surface of the posterior extremity, which has given exit to a small parasitic enemy which destroys a great many of them. Not having met with a description of this parasite, we propose to name it *Eriophilus mali*. The *Eriosoma* is also devoured by the larva of a species of fly of the genus *Syrphus*, which also attacks aphides.



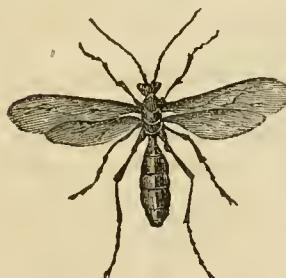
Fig. 1.

In Europe apple trees are sometimes so full of this insect as to present the appearance of being covered with cotton, and in such a case nothing can be done to save them, so that they had better be cut down and burnt, and if a whole orchard is thus affected, it should be sacrificed, and a new one planted at a different place, *in a dry and airy location*, care being taken to examine the young trees from time to time, to detect the first appearance of the insect, when they may be crushed with the hand, which is our own practice.

When the number of affected places is considerable, they may be rubbed with a hard brush, or washed with oil, white-wash, soft soap, tobacco water, oil of turpentine, lye, or potash water, the old bark being first removed, as well as suckers and small branches which have been attacked. As the insect descends to the roots, the treatment adopted must extend to these, the earth around the base of the trunk being removed for the purpose, and the cavity afterwards filled with sand.

M. Plot recommends grafting upon stocks of harsh and bitter kinds of apple, as the insect is apt to avoid these for the trunks of the sweeter kinds—to give the trees as little shelter as possible—to allow considerable space between them—to keep the branches thinned by pruning—and to allow neither grass nor suckers about the trunk.

TROGUS FULVUS.—This hymenopterous insect is the size of the figure, of a fulvous or fox color, except the



antennæ and wings, which are black. It appears in Pennsylvania in May and June, and belongs to the family of Ichneumonidae being closely allied to Ichneumon. All the members of this family are parasitic, particularly in caterpillars,

of which they destroy vast numbers. The Ichneumon pierces the skin of the caterpillar or other larva and inserts its egg or eggs. When there is not much difference in the size of the Ichneumon and the caterpillar, but one egg is inserted, but when a small Ichneumon attacks a large caterpillar, forty or fifty eggs may be inserted.

A curious fact in the economy of the larvae of the Ichneumon is, that whilst they feed within the body of the caterpillar, and upon its internal parts; the organs upon which the life of the latter depends are left untouched, as the premature death of the caterpillar would cause that of the parasites. When nearly ready to enter the pupa state, these parasites sometimes devour the entrails of the caterpillar, and in many cases this is able to form a cocoon and enter the pupa state, so that the cocoon of a butterfly may

have the appearance of giving birth to an Ichneumon. In some cases the parasitic larvae perforate the skin of the caterpillar and form their cocoons upon the outside; but in general they come forth in their perfect state.

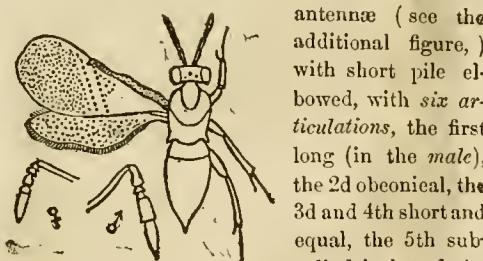
The Ichneumons are very active on the wing and on foot, and their antennæ are kept in a constant tremor. Some members of the family have a slender thread-like ovipositor several inches long, with which they pierce and convey their eggs into larvae buried in their burrows in wood, and it is difficult to account for the ability to accomplish this, as the insect must operate from the outside, both in discovering the presence of the larva, and in depositing its eggs.

E. Blanchard, a French author, states a fact which shows the extent to which caterpillars are destroyed by ichneumons; namely, out of *two hundred* caterpillars which destroy cabbage, and which were taken to ascertain the number of them which would become butterflies, but *three* produced them, the remaining *one hundred and ninety-seven* being destroyed by a small parasite of the genus *Microgaster*.

Some parasitic Hymenoptera are so small that there is room in the egg of a butterfly for several of them, and they are deposited here, instead of in the caterpillar. The Ichneumon family is not the only one which is parasitic, other families of Hymenoptera having the same general habits.

ERIOPHILUS MALLI.—The new generic name (meaning *wool-loving*) is given in allusion to *Eriosoma*, upon which this insect is parasitic; and the trivial name *mali* has reference to the apple tree, upon which it is found. Observing the dead and black specimens of *Eriosoma* with the body plump, but hollow, and a small perforation posteriorly, we examined other individuals without the perforation, and found them to contain the naked pupa of a minute hymenopterous insect, which, before it left the larva state must have bored through the belly of the *Eriosoma* and affixed it to the branch.

This insect belongs to the family of *Chalcididae*, and has the following *generic characters*. Head free, transverse, eyes large and set with short stiff hairs;



ERIOPHILUS MALLI.

female the flagellum is fusiform, (see the left hand figure) the 2d and 5th joints short, and the wings ample, the anterior one with the *subcostal vein* straight, the *stigmal branch* very short, and difficult to distin-

guish; basal portion of the disk without pile, anterior and exterior margin short ciliate; posterior wing ciliate with long hairs. Feet slender, pentamerous, adapted for leaping; medial *tibial spine* long, anterior one *curved*. Abdomen sessile, and rather long, having a sharp slender exsertile sting or ovipositor in the female; Pupa without a follicle.

Specific character. Length one twenty-fifth of an inch, expanse of the wings about twice this amount. Body shining black, with a few hairs; front vertically impressed upon each side of the middle for the antennae; *eyes violet*, scabrous, short pilose; *antennae* (except the first and base of the second joint) *white*. *Wings* with two straight lines of pile running at an acute angle from the end of the subcostal vein across the disk, which is densely pilose exterior to them.—Base of the *abdomen yellow*, followed above by several indistinct brownish transverse bands. *Anterior feet white*, the femora (except the apex) *black*; *medial femora black*, base and apex *white*, *tibiae black* with the apex and the *tarsi white*. *Posterior femora, and tarsi* (except the base) *white*. Leaps with agility.—The genus seems to have some affinity with *Agonioneurus*.

For the purpose of condensing the figure the wings of the left, and the feet of the right side have alone been represented—a mode frequently resorted to in entomological works.

Cicada septuaginta.

In our last number (p. 99) we detailed some experiments upon the seventeen year cicada, which we now continue. The male and female stated to have been alive upon the birch branch on the 18th of June, died, the male on the 20th, and the female on the 21st.

Of the single female and male living on the apple branch on the 17th, the male died on the 19th, and the female upon the 22d.

A discrepancy will appear in the number of insects used in the experiment, which amounted to *four* pair, three of which were upon the apple branch.

This experiment shows that the male may live ten and the female eleven days, after the period of impregnation. The period through which the brood has extended in Lancaster county has been about a month and a half, say from the 20th of May to the 4th of July.

Mr. Peter A. Browne informs us that he pierced his skin with the ovipositor so as to bring blood, without experiencing any evil effect, and we found the *haustellum* or snout too weak to pierce the skin.

One newspaper account which represented a boy as having been stung, probably referred to a hornet, as the insect was not stated to have been examined; and the statement about the poison turning the applied flesh of several fowls black, is a mere stretch of the imagination.

The assertion that the young pierce the bark of pine trees and cause a frothy secretion, is incorrect, as these leave the tree as soon as they are hatched. The insect which causes the secretion in question, belongs to the genus *Aphrophora*, which bears some resemblance to the cicada, but is much smaller.

To Correspondents.

Typographical errors have been much too frequent in the pages of the Journal, and unfortunately they are not confined to technical or unusual words, *keep* in one place standing for *head*. In the Horticultural department we find errors like *calcularia* instead of *calcolaria*, which renders a reference to names of plants nearly worthless. Technical words and proper names should be written with the greatest care, the safest way being not to join the letters, and to make *n* and *u* conform to print, or they cannot be distinguished with certainty in a strange word.

The editor lives in the country at a distance from the office, so that he seldom has an opportunity to correct the proofs, but endeavors will be made to give less occasion for complaint in future.

No one in particular is responsible for the scraps of a few lines in length which are selected from news papers to fill space at the bottom of short columns had we seen that on *lard candles* on page 100, we would have omitted the last sentence.

The potato was not a native of Virginia at the period of its discovery, nor did Raleigh introduce it from there into England, as most books on the subject assert. It is a native of South America, where it is still found wild, with numerous other plants belonging to the same natural order.

FARMING, without science, is like quackery in the practice of medicine and surgery—a little experience goes a great ways, and quacks sometimes hit right, and so do uneducated farmers, and nature does the rest. A good constitution and a slight affection may do well in the hands of a medical quack, and a rich soil, until exhausted, yield fair crops to hereditary or traditional tillage.

There may be some excuse for medical quackery, or good reasons why more than the ignorant tolerate it. The science of medicine, though one of the oldest, is *not perfect*, and its great truths have heretofore been locked up in the schools—a sealed book to the million—and those who have just dipped into the surface of a science have more faith therein than he who has searched to the bottom. Man loves mystery and delights in the marvellous, and in sickness men have little reason and much credulity.

But there is no excuse for quackery in the cultivation of the earth. The eternal truths of this science are as palpable as the rocks from which our soils are derived, or the nature of the plants which they sustain. We should not tolerate quackery, and yet nine-tenths of our practice is empirical. Our sons are born farmers much as “the seventh son” is supposed to be “a doctor.”—Dr. J. A. Kennicott.

Communications.

"Resolved, That J. M. McMinn be requested to furnish a copy of his address, delivered this evening, for publication in the Farm Journal."

GEO. L. PETERS, President.

N. W. MCKEAN, Secretary.

Gentlemen of the Union township Agricultural Club:

Your flattering resolution places too high an estimate on the remarks I have just made. So long an article would be a great imposition to the pages of the Farm Journal. But, if notes of the most important part of my address will be of any use to you, you are welcome to them, to be disposed of in any way you deem proper.

Truly yours,
J. M. MCMINN.

Notes of an Address

Delivered before the Union township Agricultural Club, on Saturday evening, June 28th, 1851.

The uses of manures are obvious, and their application, if directed with scientific skill, always pay well. Different kinds of soil require different kinds of manure. It is obvious then that a careful comparison of the composition of your soils, and an analysis of the different plants that you wish to grow on them are necessary. Our soils are extremely various and every farm has some peculiarities. Our books tell us, that plants are principally composed of *gum*, *sugar*, *starch*, *gluten*, *extractive*, *lignin*, *tannin*, *coloring matter*, and *wax*. *Gum* is composed of three simple, known by the name of *carbon*, *oxygen* and *hydrogen*. Carbon in a pure state constitutes diamonds, and charcoal is almost pure carbon. It is also diffused in great abundance throughout the world—it constitutes about one part in the hundred of the air of the atmosphere—united with oxygen it forms a gas called carbonic acid gas; this gas is also called "fixed air," "choke damp," and by a variety of other names. This gas in *quantity*, is destructive to both animal and vegetable life. It often destroys life in mines and in wells, and sometimes in a tight room, by being produced by burning charcoal in an open furnace. Oxygen is an aërial fluid, like common air, and has neither taste nor smell. It constitutes twenty-one parts in the hundred of the atmosphere and like carbon it is widely diffused throughout the world, but unlike carbon, it is respirable even in its pure state, and is eminently conducive to the support of animal and vegetable life; indeed, without its presence, all organic life would cease to exist.

Hydrogen is also an aërial fluid. It has no color, but a very disagreeable smell, and is the lightest of all ponderable bodies, being sixteen times lighter than oxygen. It is one of the elements of water; that body being composed of two parts of hydrogen and one part of oxygen by volume or bulk. It is injurious when breathed. This is the gas used in filling balloons.

Sugar, starch and tannin, are composed of the same material as *gum*, only in different proportions.

	Carbon.	Oxygen.	Hydrogen.
In gum we have	42.23	50.84	6.93
" sugar "	27.5	64.7	7.8
" starch "	43.55	49.68	6.77
" tannin "	51.56	4.2	44.24

Since the atmosphere contains carbon and oxygen, they are always at hand for the use of the plant, and all plants are constructed to decompose these gases, and prepare them for their use. *Hydrogen* comes from the decomposition of water.

Gluten is composed of three substances, called by chemists *gliadine*, *mucine*, and *zimeme*, this last is the principal of leaven or yeast. The insoluble part is called *gliadine*, or vegetable albumen.

Extractive, is a mixture of various vegetable ingredients and includes the whole of the *soluble matter* obtained from vegetables, reduced by careful evaporation to either a pasty or solid consistence. It differs much in different plants, and is not a single principle.

Lignin. If a piece of the stem of an herb, shrub, or tree is taken and well dried, and afterwards digested, first in water, and then in alcohol, or such other solvents as shall produce no violent effects upon the solid parts, and if the digestion is continued till the liquor is no longer colored, and dissolves no more of the substance of the plant, there will remain behind a sort of skeleton, which constitutes the basis of the vegetable structure and amounts to about ninety-six or ninety-eight per cent of the different kinds of wood, and this is called *lignin*, *ligneaux*, or *woody fibre*, which is composed of carbon 52, oxygen 42.4, and hydrogen 5.6.

Coloring matter. All varieties of color in flowers, or their parts, are owing to the different degrees of the oxidation of their pulp, called *chromule*. It is entirely the result of the action of the sun on the contained juices.

Wax is composed of from seventy to eighty per cent. of a substance called *cerine*, and from twenty to thirty per cent. of a substance called *myricine*.—The *cerine* is white and resembles wax. The two substances differ merely in their degree of fusibility and solubility in alcohol. *Wax* may be regarded as nothing more than a fixed oil rendered solid by the absorption of oxygen in the process of vegetation: hence it may be expected to occur in a great variety of states, according to its degree of oxygenation.

A very small proportion of vegetable matter is derived from the soil; at least ninety-nine parts out of every hundred are obtained from the air and water. This is manifest, when it is considered that when vegetable matter is submitted to the action of fire, but a very small part remains. Still this minute quantity is indispensable to the growth of the plant, and if the soil does not contain them, they must be supplied, and this is the true secret of manuring. To supply

these things, and render them soluble, should be the study of the farmer, for every thing must be dissolved to enter into a plant, and it takes many unseen chemical processes to reduce all these manures to a fit condition to be absorbed by the roots.

Car. acid,	-	-	-	-	-	-	-	-
Sul. acid,	-	-	5.4	1.7	1.7	6.9	2.6	2.6
Silica,	-	-	2.7	1.7	1.7	9.5	4.38	9.49
C. of sodium,	-	-	2.3	2.3	2.3	6.3	20.5	20.5
Phos. acid,	-	-	4.0	4.0	4.0	6.3	6.3	6.0
Magnesia,	-	-	42.4	42.4	42.4	3.71	3.71	3.71
Lime,	-	-	14.3	14.3	14.3	9.1	18.0	18.0
Soda,	-	-	3.6	3.6	3.6	1.7	1.7	1.7
Potash,	-	-	1.9	1.9	1.9	1.79	1.79	1.79
The ashes of Clover contains	31.63	2.23	41.61	.91	11.80	2.27	-	-
Potatoes	48.4	30.3	6.6	3.0	4.0	6.6	10.38	50.07
Barley	13.3	6.53	3.6	7.6	31.2	16	2.41	35.5
Oats	20.4	1.9	3.15	14.3	42.4	4.4	11.2	8.2
Rye	"	17.9	4.33	2.84	9.86	46.03	9.5	9.5
Buckwheat	"	8.74	21.10	6.66	10.38	50.07	1.7	1.7
Corn	"	23.92	22.59	16	2.41	35.5	1.7	1.7
Flax	"	7.7	19.1	15.3	54.4	11.2	8.2	8.2
Deas	"	39.5	3.98	5.91	6.43	34.5	3.71	3.71
Tobacco	"	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Wheat w.	"	38.84	7.64	3.09	13.54	49.25	1.93	1.93
Wheat r.	"	21.37	15.75	15.75	15.75	15.75	1.93	1.93

The stalks and the seed generally contain different amounts of these ultimate constituents; it is, therefore, frequently necessary to apply a manure that will promote the growth of the seed, and retard the growth of the stalk.

How shall these constituents be applied? *Polash* is obtained from wood ashes. Oak yields about 1.5 parts potash to the 100. Ashes are therefore a cheap and convenient manure—ashes also neutralize acids, and render sandy soils more tenacious.

Soda exists in *common salt*, and in *glauber salt*, and is a useful application to some soils, although most slate rocks contain salt in some form.

Lime is an abundant and useful manure. It acts differently on different soils. This is principally owing to the amount of animal and vegetable matter contained in the soil. Heavy clay soils contain less vegetable and animal matter than sandy or silty soils, and consequently, lime exhibits more beneficial effects on the latter than on the former kind of soils. It quickly decomposes all vegetable and animal matters, and renders them soluble. Wet soils ploughed deeply and well limed are rendered dryer and better adapted to vegetation.

Magnesia occurs in nearly all our limestones. *Epsom salt* is a sulphate of magnesia. *Magnesia* must be used sparingly, for notwithstanding it enters into the composition of many plants, large quantities have an injurious effect; however, after two years its

hurtful influence seems to become exhausted when over applied in lime.

Phosphorus is seldom found pure in nature. It exists in large quantities in bones, and the use of bone dust has been found to be of great value in Europe, where bones are imported in prodigious quantities for manure. Every farmer should use it on his land. Phosphate of lime occurs in large deposits in Morris county, N. J. It is chiefly exported to Europe. It is found sparingly in Nittany valley, and is of far more value as a manure than plaster of paris.

Chloride of Sodium is rock salt, and has been found highly beneficial as a manure. I have a work addressed to the farmers and graziers of G. B., on the use of salt, but science is transcended as usual, and the matter is over done, and consequently, salt is condemned as an "impoverisher." Barnyard manure will in some measure supply the plant with this ingredient, but many vegetables require a considerable quantity, and will not thrive luxuriantly without it is supplied from some other source.

Sulphuric Acid is applied in the form of *plaster of paris*, this mineral being a sulphate of lime. Its effects are known, though generally overrated and wastefully applied.

Silica is the principal portion of the hard stones which compose the crust of the globe, such as rich *crystal*, *agate*, *quartz*, *flint*, &c., and always exists in this neighborhood in sufficient quantity in the soil, for the nutriment of the plants. In heavy clayey soils it is often necessary to apply it in the form of sand.

Carbonic Acid exists in the air, and in charcoal, as I have before intimated, and it is probable that plants do not often languish for the want of this acid.

Some plants require other principles to supply them with food, but I will not now attempt to follow them further.

Air and water are the great machinery by which all the substances of which plants are composed, are acted upon and prepared. They reduce to gases or liquids all the various ingredients that enter into the structure of vegetables. It is the business of the agriculturists, to not only supply the soil with all deficiencies that exists in it, but also to assist in decomposing and assimilating the same.

Stable manure contains the principal part of the mineral elements for the nurture or food of plants.—*Alkaline phosphates* are, however, wanting in this manure, and several of the salts exist only in small quantities. Next to stable manure is Guano; it is, however, placed at the head of manures, but I cannot see why it should be so. It contains 45.4 Phosphate of magnesia; 1.7 Carbonate of magnesia; 0.6 Alkaline salts; 26.6 Organic matter; 2.8 Ammonia; 16.4 water, 6.2 sand, &c. It appears from some analysis that guano yields seventeen per cent. of ammonia, but it is probable that the principal part of the efficacy of guano is owing to the large proportion of phosphate

it contains. The solid excrement of Swine, however, yields more phosphate of lime than guano. It also appears that guano is defective in alkalin and on a soil defective in alkaline it would not produce very great effects, unless the defect was supplied.

Next on the list is charcoal. It is the most powerful absorbent known. It takes from the air, oxygen, hydrogen, ammonia, &c., and holds them for the supply of the plant while the weather is dry. During rain it absorbs eighty per cent of water and releases the gases to act upon the earth, and when the weather becomes dry, it parts with the water, and absorbs from the air the gases again, and thus it goes on acting as a great vegetable laboratory.

Lime is a valuable manure, but it is often wildly used. Many farmers expect lime to do every thing, as indeed, every different kind of manure has its advocate. Some select plaster, some salt, others guano, and others lime, and they use their favorite fertilizer, until the soil is exhausted of every thing else, when they abandon that as an "improviser," and their land suffers almost irreparably, because of their ignorance. Lime decomposes dead animal matter and putrescent manures, and is of great service in this way; it reduces vegetable matter and makes it soluble, thus preventing it from laying in the soil in a dry and useless condition—it absorbs a small quantity of moisture from the air, and enters itself into the composition of plants; but it is very caustic, and if there is a want of decomposable matter in the soil, it often burns as it were, every thing up. Most of our Centre County limestone contains a good deal of Magnesia, which is, in large quantities, destructive to most vegetables, therefore different kinds of limestone produce different effects.

A rational use of stable manure, guano, lime, plaster, common salt, rock salt, bone dust, phosphate of lime, charcoal, composts, ashes, and barn yard manure, used as the soil may demand, will never fail to make a fertile and productive field, and any one of them save stable or barn yard manure, or charcoal, used excessively, will diminish the fertility of most soils, and if continued, will ultimately impoverish them.

Diversity of Crops--Cotton--Coffee and Tea--Flax.

The interests of Agriculture are directly promoted by diversifying its productions, so that the prosperity of any district will generally be in proportion to the variety of profitable crops, which are cultivated by its farmers. This is shown by the flourishing condition of agriculture in the vicinity of our large cities, where the markets invite the cultivation of many vegetable productions, which are not grown at a distance from such localities.

There are very many agricultural plants, for the produce of which we pay large sums, importing from abroad, what may just as well be reared in our

country. Neither the sugar cane, rice, tobacco, nor cotton plant is indigenous; and yet these are all grown with unequalled success in the United States, and constitute by far the greatest amount and value of our exports.

The quantities of coffee and tea consumed in this country, are prodigious. It has been ascertained that we imported, in one year, 46,070 tons of coffee, when the quantity imported into France, was but 20,650 tons, and that imported into the United Kingdoms of England, Scotland, and Ireland, but 16,250 tons. We are assuredly the greatest coffee drinkers in the world.—On the other hand, the English consume more tea than we do. It is with them a universal beverage. Still the use of this article in the United States, is very great and is increasing. Now both the tea and coffee plants may be cultivated to any extent in our country—the coffee tree in Florida and Texas, and the tea plant much further north. The green teas are raised in the Northern provinces of China, where the snow is said to be on the ground and upon those shrubs for days together. They might doubtless be grown in our middle and Western States. It is fortunate for our Southern friends, that their soil and climate are so well suited to these valuable plants; for as to their great staple, cotton, the days of their monopoly are numbered. England cannot much longer submit to the danger of having but one adequate source of supply, and that an independent one. Already the production in Asia and Africa,—not to speak of the magnificent regions of Brazil—has increased to such an extent as to show, that she will very soon derive a greatly augmented supply from those quarters. Besides the experiments on flax, demonstrate that an important competition with cotton is likely to spring up from the improved manufacture of that material; of which the northern, middle and western states, will be able to grow enough, to supply the world.

With respect to coffee and tea, there is a certainty of their continuing to be articles of diet, without any chance or change from the caprice of fashion. Fashion did not introduce them, nor can it lay them aside, any more than dispense with the use of sugar. It is very remarkable that these two productions, originating in far distant countries, should have come into such general use and acquired so permanent a hold upon the taste of mankind. Recent chemical analysis satisfactorily explains it, by developing the surprising fact, that the essential principle of coffee is identical with that of tea. *Caffeine* and *theine*, the names applied to these substances respectively, possessing exactly the same chemical constituents. It is also proved that the beverages made from these plants, so far from being a slow poison, (as was once supposed,) are as wholesome as they are palatable.

A. L. HAYES.

Lancaster, July 15, 1851.

MR. EDITOR:—Having made a call on the practical farmers to contribute to your Journal the experience they may have in agriculture, I comply with your request. Having to write in a language which is not my own, (I had to study the English at the age of thirty years,) I hope all due allowance will be made. I will have to enter into a short biographical sketch to define my position.

Thirty-six years ago, when the fall of Napoleon carried me, together with thousands of others, an exile to this country, I entered into the mercantile business, but soon found that the sedentary habits and anxiety of mind which follow it, were injurious to that physical energy, (so necessary in this country,) to which a military life had accustomed me. I married what a city miss calls a "country girl." Though I had to renounce the enjoyment of that refined intellect, the fruit of a careful education, I was fully compensated by enjoying that comfortable home—that fireside bliss, so well understood in this country. Being scant of funds (exiles seldom bring money along) I could only buy a cheap property. An opportunity presented itself—a worn out farm situated in Lykens Valley, Dauphin county, whereon a mill was erected which had been condemned by millers and millwrights as unfit to do good work. Mill and farm rented for \$125 a year; I bought it for \$4400. Drilled at a military school, I still retained some knowledge of hydraulics, and though not a miller, I discovered that the mill could be made good. After having made the alterations, I found myself indebted \$2200, the interest of which was higher than what the property had rented for. The mill could do more than double the work it did before. This was a little help, yet I had to work hard and go through all the handiwork of a farmer to discharge my debt.

While my children were growing up, a difficulty arose for which I was not prepared. Living in a German settlement I was compelled to leave my farm and remove to Pottsville in order to have them educated under my own eyes. After residing there for some years, I was glad to see that my sons had not lost their taste for rural life. I sold the property in Lyken's valley for \$10,000, and bought the one on which I now reside for \$5000. It was in the same poor condition I found the first property. The land, one hundred and six acres, was considered worthless. There was attached to it thirty-six acres of good woodland, and a mill entirely out of order. The property is now in thorough repair and would command a rent of \$700. I have retired from business and given it into the hands of my sons, the one being a practical farmer and the other a practical miller.

A difficulty which appears to be overlooked, is the peculiar position of Pennsylvania. Nearly one half of its farming population is of the Teutonic race—only one in ten can read an English agricultural

journal, so that nine-tenths do not participate in its benefits.* Is it not absolutely necessary, if a really patriotic zeal animates the community, to prepare those nine-tenths to take a proper interest to promote an art that is the fundamental wealth of the nation? It may be asked, why don't the Germans take advantage of the school law and educate their children? Ay, there's the rub. If, Mr. Editor, you will open your columns on that subject, I will give my opinion as to the cause and its remedy.

The German Pennsylvania farmer stands pre-eminent as an agriculturist, and it is of the highest importance to induce him to take an interest in the effort which is now making to promote agriculture—to make him understand the great discoveries in geology and agricultural chemistry.

Having been appointed a member of the executive committee of the State Agricultural Society, for the congressional district in which I reside, I thought it my duty to attend its meeting, when I stated my opinion on the subject of agricultural education.—According to request I have prepared a plan for agricultural schools and experimental farms, which I sent some weeks ago, to the gentlemen composing the committee. When it is presented to the executive committee for consideration, I shall state my opinion at large.

Excuse the long preamble I have made, and my digression from agricultural subjects, but they may serve to illustrate future communications.

H. SHUBART.

Bethel, Berks co., July 9, 1851.

* Facts will not sustain this assertion of our correspondent. Although there are many German farmers in Pennsylvania, the proportion is not near so great as he makes it. We venture to assert that two-thirds of the Pennsylvania farmers understand and read the English. This, however, may not be the case where our correspondent resides, his district containing more German farmers than, perhaps, any other section of the State.—ED.]

The Cucumber Bug.

Observing an article on this troublesome bug by J. S. Keller, in the last number of the Journal, I send him below, a receipt which he will find more effectual than either "lime dust, ashes, black pepper, plaster, flour of sulphur, &c." As it is not original with me, I shall also make over to him, without charge, all my claim to the \$50 premium, for "the person who discovers an effective remedy."

Apply, through the rose of a watering pot, the holes of which will have to be made larger than common, whitewash of such a consistence as to adhere to the leaves, and leave a thin coating. This will not prevent their growing, and will be found an effectual antidote to the bug, who does not fancy the trouble of going through the lime to get at its food. The application may be repeated if necessary.

West Chester.

PASCHALL MORRIS.

Cure for Murrain.

FRIEND SPANGLER:—The idea has long been entertained by drovers, that cattle driven from the Western Reserve and from Erie county, would escape that disease so fatal to them, called Murrain. Experience, however, proves this not to be the fact. Last spring I lost two pair of fine oxen and one cow, by murrain. One pair of the oxen was from the Western Reserve, the other from Erie. The cow was of my own raising. Every remedy of which I had ever heard was tried with them, but without success. One after another died, the disease seeming to set all medicine at defiance.

A short time since, one of my best feeders took the disease. I did not discover it until he appeared to be beyond hope of recovery. His eyes were sunk in his head, and his urine was apparently nothing but blood. In moving from one spot to another he staggered rather than walked, and his general appearance was such, that I did not expect that he would live five hours. The discouraging results of my former efforts to check the disease, had so disheartened me, that I concluded to let the poor fellow die, without an effort to save him. A worthy member of my family, more hopeful than myself, resolved to try her skill. She accordingly procured a lump of eoperas, of the size of a hulled walnut, and pulverized it, after which she dissolved it in a pint of water.—This was in the morning. Some poke-root was then procured and a tea-cup-full grated, which was afterwards boiled in a pint of milk. A tea-cup-full of molasses was added to the poke-root and milk, and the bullock drenched with it while it was lukewarm. This last drench was given in the evening. For three successive days the same course of treatment was pursued. On the fourth morning, half a pound of Glauber Salts dissolved in water was given him, and on the fifth morning I discovered that his urine had assumed a healthy appearance. He began to eat freely, and contrary to mine, and the expectation of all who saw him, he is now as healthy as any of the other of my feeders.

I had almost forgotten to say that during the time the medicines were being used no water was given the animal, and this should be the treatment always.

I have great faith in the remedy, and believe it infallible if strictly adhered to, as above described.

Fruit Hill, 6th month, 1851.

J. S. B.

Liquid Fertilizer.

1 lb. Nitrate of Potash, 4 lb. Sulphate of Soda, 4 oz. Carbonate of Ammonia, 1 lb. Muriate of Soda, 1 lb. Carbonate of Lime, 1 peck sifted wood ashes.—mix these ingredients with 2 gallons of water in a tub, let them stand at rest for 8 or 10 hours, then add them to about 80 gallons of water, stir well, and it will be fit for immediate use.

MR. EDITOR: Above I send you a recipe for preparing an excellent Liquid Fertilizer, containing

most of the active constituents of Guano, in a Chemical state of combination, and which I have for years past made use of very successfully in the cultivation of various kinds of vegetables, particularly cabbages, cauliflowers, beans, cucumbers, melons, celery—giving each about 1 gill of the Fertilizer, several times a week. To celery plants in trenches, I give a watering-can full to every 150 plants twice a week.

On account of its highly stimulating and nourishing qualities it causes a very vigorous and rapid growth in all plants and greatly increases the size of vegetables.

In transplanting, as a general rule, I pour about half a pint into each hole intended to receive the plant, and when it has sunk into the soil, the plants are set therin. I have found by experience, that they droop less, than when set out without its beneficial influence.

If, after seeds are sown and raked in the soil, a good sprinkling be given from the rose of a watering-can, it will cause a more rapid and speedy germination of the seed, and in a great measure prevent the depredation of worms and insects which often prey on the vegetating seeds.

It will be found well adapted for Flowers, Pot-plants and Shrubbery.

The above ingredients may be made into an artificial Guano, for using broadcast, or for on Corn, Potatoes, &c., by incorporating them when dissolved in two gallons of water, as above directed, with half bushel of ground plaster, and the same quantity of good earth, without stones, preserving in good tight barrels.

J. F. HEINITSH.

Lancaster, July 9, 1851.

GOOD AND BAD VINEGAR.—If a mixture of sulphuric acid and water, (known to be such,) were offered for sale as a substitute for cider vinegar, few persons could be induced to taste, much less to purchase it for general family purposes. And yet a very large proportion of the liquid called white wine vinegar is made in this way. Sometimes it is colored to give it the appearance of the ordinary cider vinegar. Sulphuric acid is a poison and its effects upon the system, when used in the form above mentioned, are most deleterious. It possesses corrosive qualities and differs greatly from acetic acid, which, when properly diluted, as in vinegar, promotes the digestion of crude vegetables, such as salads, &c. Too much care cannot be taken to avoid these impositions in the purchase of vinegar. Many families use it at every meal, and if composed mainly of sulphuric acid, it will destroy the teeth and lay the foundation for cancer in the stomach. The presence of sulphuric acid may be detected in vinegar, by adding a small quantity of chloride of barium, which will cause a white precipitate to be thrown down.

THE following ode, upon the anniversary of the Berkshire (Mass.) *Agricultural Society* of 1818, was published in Pennsylvania (anonymously) thirty years ago, and much admired. It is from the pen of W. C. BRYANT, a name not then known to the public—now at the head of our poets. W. H. D.

Since last our vales these rites admir'd,

Another year has come and flown,

But where her rosy steps retir'd,

Has left her gifts profusely strown.

No killing frost on germ and flower,

To blast the hopes of spring, was nigh,

No wrath condens'd the ceaseless shower,

Or sealed the fountains of the sky.

But kindly suns and gentle rains,

And liberal dews and air of health,

Reard' the large harvests of the plains

And nursed the meadow's fragrant wealth.

As if the indulgent Power, who laid,

On man the great command to toil,

Well pleased to see that law obey'd,

Had touched in love the teeming soil.

And here, while autumn wanders pale

Beneath the fading forest shade,

Gathered from many a height and vale

The beauties of the year are laid.

Here toil, whom oft the setting sun,

Has seen at his protracted task,

Demands the palm his patience won,

And art is come his wreaths to ask.

Well may the hymn of victory flow,

And mingle with the voice of mirth,

While here are spread the spoils that show

Our triumphs o'er reluctant earth.

[We make the following extracts from a "Lecture on Hair, Wool, and Sheep breeding," delivered by Peter. A. Browne, L. L. D., before the Central Southern rights Association of Virginia, and published in the Southern Planter at Richmond.]

Cotton was grown in Georgia as early as 1787, but was not seriously thought of as a great American staple until about 1790. From Oct. 1st, 1790, to Sept. 30th, 1791, the United States exported 189,216 lbs. of cotton. In 1835, the lands used in the United States for the cultivation of cotton were estimated at three hundred and twelve millions of dollars. Sheep breeding, for fine wool, dates as late as 1800, and yet it would not be hazarding too much to say that, even not, the raising of sheep and the wool interest, are as important in the United States as was the cotton interest in 1835, and I venture to predict, (let who will sneer at it,) that in thirty years from this time, *wool will become as great an American staple as cotton.*

Until the census is published, we have no very accurate means of ascertaining what is the number of sheep in the United States; but we suppose it may safely be put down at thirty-five or forty millions.—Now if we value these at two dollars a piece, which considering that individuals of good breed are often sold for several hundred dollars, is moderate enough, we have seventy or eighty millions; then if we add three shillings per head for the land and buildings necessary for their shelter and support, we have one hundred and five to one hundred and twenty millions. But there are many persons who hear me, who re-

collecting with what avidity everything was received in 1835, that was calculated to improve the growth of cotton, will be at a loss to discover why what is advanced by trichology, in regard to breeding and raising sheep and improving the quantity and quality of wool, is now heard with such apparent indifference. Is the examination of a subject which regards thirty-five or forty millions of domestic animals and one hundred millions of real estate so insignificant?

The General Government through the Patent Office, a few years since, sent a special agent to Europe to collect specimens of all the fine wools. He brought back with him samples from Russia, Hungary, Silesia, Prussia and Saxony. They were divided into parcels and sent to the Governors of the different States. The one sent to Pennsylvania lately came to my hands. I measured the wools and compared them with the growth of our own country, and had the pleasure of announcing what had never before been known, or even suspected, viz:

THAT WE CAN RAISE AS FINE WOOL IN THE UNITED STATES AS ANY COUNTRY IN THE WORLD, AND FINER THAN ANY EXCEPT SAXONY.

This important information, showing that the United States has it in her power to create *another great staple*, equal in importance to her cotton, was published in "The Plough, the Loom and the Anvil,"—was read,—has never been contradicted—and is now almost forgotten!

Let us now examine this subject in another point of view. Let us assume that the number of sheep in the United States is thirty-five millions. In Germany the average annual produce of fleece is put down at a trifle over two pounds. In England, where the wool is coarser and less valuable, the average is four pounds. Our average is put at from two and a half to two and three quarters, but I am persuaded that it is underrated, for I have in my cabinet specimens of fine wool, grown in the United States, from three and a half to four and even as high as five pounds. But suppose we say three pounds; this will give us an annual produce of one hundred and five millions of pounds: which, at forty cents a pound, will make forty-two millions of dollars. And observe, that in this calculation nothing is said about the increase of lambs. The annual production of all the gold and silver mines of North and South America was estimated by Baron Humboldt at nine millions of pounds sterling—at present, (except the recent discoveries in California,) it is less than five millions of pounds or twenty-five millions of dollars.

Mr. Hughes, a London wool broker, upon his examination before the House of Lords in England, in 1828, on the subject of wool and woolen manufactures, thus delivered himself:

"Other countries are making rapid strides to compete with us, [England,] particularly North America. Within the last twelve months there have been upwards of five thousand bags of *foreign* wool, shipped from the port of London alone, for that country, for the purpose of being manufactured. They [the people of the United States] are now making very rapid strides and I have no hesitation in believing that, in a few years they will be independent of us for *coats*, as they now are for *hats*."

I did every thing within my power to have our fine wools exhibited at the World's Fair; had I succeeded, the House of Lords might have learned that Mr. Hughes was a *prophet*; and that the time *has* arrived when the American people can not only be independent of Great Britain for their own coats; but that they can furnish wool, of the growth of the United States, fine enough for the most fastidious of Europe.

England cannot raise the fine wool required for manufacturing broadcloths. Lest we might be suspected of prejudice, hear what is written by *one of her own subjects*.

In "the industrial resources of Ireland," by Robert Kane, M. D. Honorary member of the Royal Dublin Society, &c., we find the following: "The woollen manufacture has been, at all periods, considered as of high importance in this country, [Ireland:] so that at certain times, it was deemed necessary [by England] to take measures to *moderate its prosperity* [!]"* A very large quantity of wool is grown in Ireland.—The total number of sheep being 2,091,199. A great deal of this sent to France, where it is manufactured into 'mousseline de laine.'". After noticing the difference between wool that will felt and full, and fleece [hair] which will not, he proceeds thus: "In moist, cold climates, such as the British Islands, the *natural* wool is, universally, long staple and *unfit for feeding*; whilst in dry climates, with hot summers, the wool is short stapled and *felts strongly*. The wool is produced *not merely in Ireland, but in England*, also, is thus *exclusively adapted to the worsted trade*. For woollen cloths and similar goods the wool is *imported from the Continent*. It has often been an object with the English wool growers and landed proprietors to *produce this felting wool, in England*, and thus get rid of the necessity of purchasing abroad; **BUT IT HAS BEEN FOUND IMPOSSIBLE, AFTER THE MOST EXPENSIVE EXPERIMENTS, in importing sheep of particular flocks.** It has been found that in two or three generations, of *even the pure breed*, the influence of the climate and food *totally changed the character of the wool*, and brought it to the same quality as that of the native animals."

We repeat, then, without fear of contradiction, "England cannot produce the fine wools required for manufacturing broadcloths," but she will continue to manufacture these cloths as long as she can find sale for them; consequently she must import fine wool from some other country. Why should not *this* country be the United States? Why not Virginia? Can any one give a reason? If we can produce as fine wool as any other country, why may she not import our *wool* as she does our *cotton*? How will it be if we can produce *finer* wool than any other country? And we can produce finer wool than any except Saxony.

One portion of the *art of sheep breeding* consists in selecting the *proper breed of sheep for the particular location of the farmer*. We have already seen that neither England nor Ireland can raise the *fine woolled sheep*. Doctor Kane says that it has been found to be *impossible*, after the most expensive experiments.—He attributes the failure to *climate* and food. The *natural* food depends upon the *soil* and *climate*; so that he might have said "*soil and climate*." If it depends upon *climate* it is fortunate for us, that in this widely extended continent we have almost every variety of it; but still, it is a most important point for the farmer to know which breed of sheep will thrive best and produce the finest wool, in the particular district where Providence has cast his lot.—And we confess that upon turning over the leaves of the volume of the Cabinet of American Wools, we were forcibly struck with the correctness of the remark first made at the late Pennsylvania Agricultural Convention, that two parallel lines might be drawn over the map of the United States, including within them the geographical (and perhaps the geological)

district best calculated for rearing the *fine-wooled sheep*. We also remarked that there was another extensive district of our country, easily pointed out, which is admirably calculated for raising the fleece, which, in England, is called "*long wool*," but which is properly "*hair*." If this information turns out to be correct, (if it is so, only to a limited extent,) then my collection of wools, made for a different purpose, will have shed more light upon the connexion of climate and soil with wool growing, than all the learned disquisitions and opinions that have ever made their appearance before the public. Two things, we think, are certain; 1st. That the wool staplers and manufacturers will find it their interest to consult this record, for the best information, where they may find the finest fleece; and 2d. The new beginner in sheep breeding may also there learn where to apply for the best breeds.

But, perhaps, after all that has been said, some persons may believe, that while this information may be well enough for the *sheep breeder and wool manufacturer* that to the public, in general, it is comparatively useless. But the true patriot, particularly if he be a politician, (in the proper sense of that word,) is deeply interested in knowing what are all the great and leading interests of his country.

The author of the "Industrial Record," speaking of Thompsonville, in Connecticut, says that they manufacture carpets, annually, to the amount of 480,000 yards. To enable them to do this, they use 1,000,000 and upwards of pounds of wool, all of which is, he says, imported from either the Mediterranean or South America. But I contend, (and you agree with me in this opinion,) that **EVERY POUND OF THIS WOOL OUGHT TO BE RAISED IN OUR SOUTHERN STATES.** The sheep that produces *that* fleece thrives *there*, and its breeding and raising, from Delaware to Georgia, would be a source of immense profit. But here we feel called upon to notice an error into which the editor of the work above quoted has, inadvertently, fallen. He asserts that the importation of the Mediterranean and South American wool, at seven cents a pound; does not interfere, in the slightest degree, with the domestic wool grower, who, (he says,) cannot afford to raise wool at so low a price, when, with the same food and expense, he can raise fleeces worth on an average, thirty cents a pound. But he seems to have been entirely unaware of the fact, that the places where these hairy fleeces can be grown, are *unfit for the breeding and raising of the fine woolled sheep*. He seems also to have lost sight of the fact, that the sheep, whose wool is worth (as he says,) thirty cents a pound, produces, on an average, only three pounds of fleece; whereas of the hairy fleeces, bred in the United States, I have in my cabinet specimens that produced $17\frac{1}{2}$ lbs. Now a schoolboy can cypher this out, to show that this latter wool is the most profitable.

5 lbs. of fine fleece at 30 cents,	\$0 90
17 $\frac{1}{2}$ lbs. of hairy fleece at 7 cents,	1 22 $\frac{1}{2}$

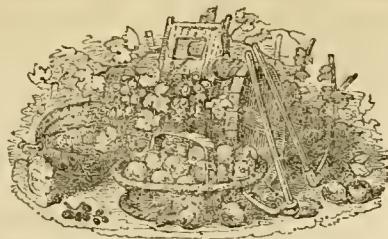
Balance in favor of the hairy fleece, \$0 32 $\frac{1}{2}$
To raise one million of pounds of fleece at 3 lbs. a sheep would require 333,333 sheep.

But to raise one million of pounds of *hairy* fleece, at $17\frac{1}{2}$ lbs. per sheep, would require only 57,140 sheep.

Difference 76,193 sheep, the feeding and taking care of which, would cost \$171,420.

Our brethren of the Eastern parts, of the Southern States, should, therefore, turn their attention to breeding and raising the *hairy sheep*; and Congress should encourage them to do so, by laying a duty on foreign wool, though worth only seven cents a pound.

* This puts us in mind of British writers talking of the *arrogance* of New England in attempting to manufacture.



Horticultural Department.

Cultivation of Flowers.

One of the best evidences which can be given of a refined taste and gentle nature, is a fondness for flowers. There is something in the appearance of a window well filled with fine plants that at once possesses us in favor of the lady who cultivates them. It may also be set down as a fixed fact, that a want of fondness for flowers, is a pretty sure indication of a morose and selfish disposition. Presuming, however, that there are few of our lady readers who belong to the latter class, we present an abstract of valuable hints, for window gardening, which we commend to their especial attention.

Plants grown in pots require more attention than those grown in almost any other way. They are generally kept in the house, and most frequently in those apartments which the family regularly occupy. The disadvantages attending their position are such as to require the utmost attention to counteract them. The air of the family room is generally dry, and as a plant derives its nourishment from the leaves as well as the roots, this kind of an atmosphere is peculiarly unfavorable to them. The pores of the leaves become filled with dust, and hence fail to act with their natural energy. It should therefore be a fixed rule to give the plants the benefits of fresh air whenever practicable. The leaves, which have suffered from the dust and dryness of the sitting room, should be well syringed, so as to clean them thoroughly of the particles of dust, and restore the pores to their naturally healthy condition.

Water should never be permitted to stand in the saucers for any length of time, as the effect of the stagnant water in the winter season, is to chill the roots and thus injure the healthiness of the plant; besides, the water will cause the Spongioles of the roots to become rotten.

Pluck off and throw away all the decayed and decaying leaves, as both the family and the plants will be benefitted by their removal. The decaying vegetable matter destroys the beauty of the plant, as well as the fragrance of the flower.

Give the plants the benefit of light and air, both being essential to their growth and health. Do not keep them too warm. We see the importance of this when plants cultivated in a green house are suddenly

brought into a warm room. The leaves shrivel up—flower buds fall off without expanding—and the plant becomes sickly, and either loses its leaves or dies.

By attention to the hints thus briefly thrown together, every lady may cultivate as many handsome plants as will fill her windows. In conclusion, we would say, that if many young ladies would devote one half the time to the cultivation of flowers, they give to novel reading, they would not only be more admired, but they would render themselves much wiser, healthier and happier. In these days when green houses abound in almost every little village, a beautiful rose bush, or some other handsome plant, may be had for the price of a trashy novel. What lady of taste would not prefer the plant to the novel?

How to Propagate the Raspberry.

PHILADELPHIA, JULY 7, 1851.

My Dear Sir:—Your favor of the 4th inst. was received on Saturday. I shall be pleased to see you when you come to the city; will you do me the favor to bring with you a few buds of the General Hand plum.

In the July number of the Farm Journal, you have given me a position in the Pennsylvania Horticultural Society, to which I am not entitled. Though a member of the fruit committee, I am not the chairman. This honor was conferred on E. W. Keyser, Esq., in 1840, three years before I became connected with the society; and so highly have his services ever been appreciated, that he has continued to receive this mark of approbation and confidence every successive year since his first appointment. On revising the constitution and by-laws, in 1844, among the amendments adopted was one creating a "committee for establishing the names of fruits." My name being placed first on that committee has probably occasioned the erroneous impression referred to above, and which has several times appeared in print. Having been instrumental in disseminating this error, I trust you will do me the favor publicly to correct it.

I now proceed to make a few more remarks on the raspberry.

The usual mode of propagating the raspberry is by suckers. As however but few of these are sent up annually to supply the place of the old canes which always perish after having matured the fruit, it must necessarily take a considerable time to multiply the variety to any extent.

It may also be readily propagated by layering.—Cuttings strike with much difficulty.

But the best and most expeditions mode of multiplying the raspberry is by division of the roots. In this way it may be propagated with as much facility as the *Morus multicaulis*, or *Paullinia imperialis*.—By pursuing this plan, I have, in one year, from a small plant, raised forty or fifty; and if I might take not Mr. Robert Buist and Mr. James D. Fulton ha_{ve}

been still more successful. Admitting however that only twenty plants can be raised in this way in a season; then in the same ratio in two years the produce from a single plant will be 400—in three years 8000—in four years 160,000—and in five years 3,200,000.

The root of the raspberry is replete with eyes, visible or dormant. It may be divided therefore into very small portions. The best time to make the division is at the commencement of the winter or early in the spring. The pieces should be planted in small pots and placed in a cold frame—in a green house at a low température—or in a room in the house without fire, but with a southern exposure. During the past winter, I have raised several hundred plants from root cuttings in rooms with a northern aspect, without fire, and where the thermometer sometimes was as low as 32° Fahrenheit. This plan, however, of propagating the raspberry, in a room where the sun never enters, cannot be recommended, as the solar rays are essential to a healthy and vigorous growth.

Having occupied enough of your space for the present, I must defer to a future occasion some other remarks I purposed making on this subject, and especially in relation to a kind of food to which the raspberry is particularly partial.

Very truly yours,
W. D. BRINCKLE.

Dwarf Pear Trees.

MR. EDITOR:—My experience in the cultivation of pear trees on quince stocks, is similar to that of Mr. Eshleman, as recorded in the "Farm Journal" for July. Nine years ago, I grafted some seedling quince trees with scions of choice descriptions of pears.—They all took and grew well during the first season. Several of them attained the height of four feet, and upwards. In the following year, however, most of them ceased growing, and their discolored leaves gave signs of disease and decay. Various suggested remedies were tried—the application of sulphate and oxide of iron, charcoal, &c.—without beneficial results. Stirring the soil, and the use of fertilizers and stimulants, were equally unavailing. In the ensuing spring several were found to be dead, and the remainder made no progress in growth subsequently, though the effect of careful transplanting was tried. Last fall I had only two remaining. Both of these put forth leaves this spring; though one of them died within six weeks thereafter. The other blossomed; the corymbs opened finely, but set no fruit; and no new wood has been made. Latterly, it shows, unmistakeably, symptoms of "the sere and yellow leaf," and will scarcely survive the winter.

These experiments were made on seedlings of the common quince. I have two dwarf pear trees, procured from New York, which are said to be on stocks

of Portuguese quince. These have grown finely, make new wood freely every season, are good bearers, and are now in a very thriving state. From the roots of them, several suckers came up, on three of which I have grafted pear tree scions. These are now growing, and will be set out separately next spring.—Should they live and do well, I shall have to conclude that success depends on the *kind of quince* which constitutes the stock.

I have several seedling pear trees, on which I design making an experiment at *dwarfing*. I shall graft them next spring with scions of improved fruit, as close to the *collet* or base of the stem as practicable, and allow them to grow one year. In the ensuing spring I shall regraft them one inch higher up, with scions of a different variety, though still of select fruit; and will repeat this operation for two more consecutive seasons. The effect will probably be, to dwarf the tree, and possibly may improve the quality of the fruit. The process is certainly a slow one; but it can scarcely be more protracted and less successful, than the attempt to produce dwarf trees on stocks of the common quince.

Cats have a strange *penchant* for whetting their claws on the stems of dwarf trees, and thus deeply lacerating the bark. A piece of twine, looped to one of the lower limbs, and wound spirally but loosely around the stem, down to the ground and there fastened, will prevent injury from this source. Five or six turns to the foot, are sufficient.

I heard lately of a sapient operator, who grafted a *Bonne Louise* scion, this spring, on the topmost shoot of an old quince tree, duly trimmed up. He may, perhaps, be more successful in *raising* dwarfs, than either Mr. Eshleman or myself! W.

[The partiality of the borer and other destructive insects for the quince stock is well known, and unless proper precautions are taken to guard against their attacks, they almost invariably destroy them. We have, at this time, quite a number of dwarf pear trees under our care. Most of them were imported from France a few years since, and all of them are grafted on the quince. When first planted, every attention was given them; but, as in the case of those referred to by our correspondents W. and Dr. Eshleman, they gave unmistakeable evidence of a dying condition. Unwilling to lose them, the gentleman who then had the trees in charge, determined to make a last effort to save them. He dug a trench around them, which he filled with suitable manure, and then heaped the earth around the tree until the quince stock was completely underground. The good effects of this treatment was soon apparent. The trees recovered their healthy appearance—new wood was rapidly formed, and at present writing nearly all of them are filled with fine fruit. Whether their recovery is attributable to the trenching and manuring, or to the covering of the quince stock with earth so as to secure it from the borer, we leave it for others to determine, though we cannot but think the protection afforded the quince stock was the cause of their recovery. We shall be glad to hear more on this subject.—En.]

Evergreen Trees and Shrubs.

The demand for evergreen trees has increased so rapidly within the last two years, (having been the present season, perhaps, unprecedented,) that I propose to notice some of the well known, as well as more rare varieties, as a matter of interest to many of the readers of the Farm Journal; including those of more recent introduction from abroad, and giving promise of being valuable additions to our pleasure grounds and arboretums.

Of the beauty and value of ornamental trees and shrubs as appendages to a dwelling—of their intrinsic worth in enhancing the value of property to those who regard only dollars and cents—but little need be said. The time has gone by when shade trees around a dwelling to shield it from the sun, and to increase its attractions, were considered as superfluous additions which might be attended to or not at pleasure. Without these, a place can now rarely be sold; with them, and where the space allotted is large, and the selection and arrangement judicious, the value is greatly increased.

The persistent foliage of evergreens at a season when all else is bare, their variety of growth, and shades of color; from the stiff and sombre yew, to the lively tints and graceful habit of the hemlock or cedar* make them especial favorites: and first, a few words with respect to transplanting them. That there are more failures with these, than with other trees, is most certain; and it perhaps is equally true that there need not be. With the exception of three or four months, we hear occasionally of evergreens being moved at all seasons of the year with success. But while one swallow does not make a summer, so neither does the fact of moving them in the fall or winter, prove this to be the best time. Much in these cases may depend on the severity or otherwise of the winter. My experience is, that rather late in the spring, or just as the roots are commencing to throw out new fibres, and starting in their new growth—evergreens may be transplanted with about as much certainty as other trees. It is, however, all important, that after being taken out of the ground, the roots should not be allowed to become dry. Their newly formed extremities or spongelets are easily closed up from this cause, and they differ from deciduous trees in not readily again opening to absorb their food. They have not the same elasticity, and death ensues to the tree from the cutting off of the supplies.

Where it is an object to remove them of a large size, it can safely be done in winter, by digging a trench a few feet from the body of the tree at any open spell of weather, and allowing the mass of earth within to

become frozen, when the whole can be got under and moved off on a low truck or sled, the hole being previously prepared to receive it. Trees of twenty or more feet in height can be moved in this way, with but little perceptible cessation of growth. In addition, observe the same general rules in planting as with other trees, to place them at about the same depth as before, to dig large holes, so as to leave at least one foot, and the more the better, between the extremities of the roots and the solid ground, mulch them the first season and water in dry weather, and failures will rarely occur.

I shall now give a list of some of the best foreign varieties of evergreen trees and shrubs which have been found well adapted to our county, naming them as they occur, without any botanical arrangement, and intending, in the description, more for the general planter about to ornament his grounds, than for the botanist or nurseryman, who are, of course, familiar with them.

First and foremost, on account of its intrinsic worth and the great demand for it, is the *Abies excelsa* or *Norway fir*. This tree is a native of northern Europe, and from its entire hardiness and great beauty, is a universal favorite. It will grow either in the shade or in an exposed position; is easily transplanted; improves with age, becoming more dense and compact, which makes it valuable on the exposed side of a house; and is a rapid grower, its leading shoot often making three feet in one season. The branches have a pendent or drooping habit, giving it a stately as well as exceedingly graceful appearance. Trees with this tendency, which is a mere accidental property, are much enquired for.

The *Norway spruce* (or *fir*) has been tried in some parts of Europe for hedging, and where a heavy and impenetrable screen is wanted, would answer well; but its comparative scarcity, and the great demand for it as an ornamental tree, is a difficulty at present. In its own country, it reaches one hundred and fifty feet in height and grows freely in all soils and situations. Our common black spruce, *Abies nigra*, is often sold for the Norway, and is even found occasionally among it in importations by nurserymen. It is an inferior tree in every respect, and not always easy to detect when small, but it soon shows its inferiority. Its leaves are considerably shorter, and lie closer than the other, and it is also a slow grower.

The *Abies picea*, or European silver fir is, in our opinion, very little, if any, inferior to the preceding, and it is surprising that it is not more generally planted. It is a majestic tree when large, and although rather slow in creeping up, yet after reaching six or more feet it grows strong and vigorously and retains its symmetry as it advances; in this particular differing from our own balsam fir, which very frequently loses part of its foliage and displays bare and unsightly branches. It has also a more horizontal growth, covering a

[* We object to *red cedar* or any other evergreen that is *brown*, as such trees convey the idea of being burnt out by the summer's heat, an appearance which has a bad effect upon the landscape in the vicinity of Philadelphia.—ED.]

much wider surface, is of a much deeper green, and more glossy, and we think on all accounts much more desirable than the American balm. The under surface of the leaves has two white lines running lengthwise, giving it a silvery appearance, whence its name. This tree is very apt to make more than one leading shoot, which of course should be shortened in and kept back so as not to interfere with the main one. In Europe they consider this the true balsam fir, and our balm of gilead the spurious one. It will reach, here, the height of sixty feet. I will resume this list in the next number.

PASCHALL MORRIS.

Transplanting Fruit Trees.

[Translated for the Farm Journal from the Jüterbog
Wochenblatt.]

The circumference of the hole in which the tree is to be planted, should not be barely sufficient to receive the roots, but considerably larger, so that in extending themselves, the roots may find a more loose and porous soil wherein to spread.

In digging the hole, the surface soil, or mould, should be thrown out to the right hand, and the sub-soil to the left; and when planting the tree, the surface soil, being richer, should be thrown in first, or returned directly on and around the roots, and the poorer subsoil placed thereon, to be subsequently improved by the action of the atmosphere and the application of manure. If any well rotted manure is used at the time, it must be put in only after the roots have been covered with the surface soil and a layer of the subsoil has been placed thereon; and it should be at once thoroughly mixed or incorporated with this reserved subsoil.

After the hole has been dug and the tree is planted therein, the roots must be carefully spread out, so that none are doubled in or bent, and thus forced to take a wrong direction. If their natural growth has been such as to leave considerable vacancies about the stem, the roots may be drawn towards each other at those points, and pinned down with wooden pegs, so as to distribute them with as much regularity as possible.

The ground which is placed immediately on the roots should be free from stones and thoroughly broken up, that it may surround and cover them well, without leaving hollows or vacant spaces; and, before treading the ground down, the tree should be slightly lifted once or twice, and gently shaken, to settle the fine earth among the fibrous roots. When all the roots have been thus covered, the ground should be lightly pressed down by treading. The subsoil, retained for this purpose as before directed, is now to be thrown in and pressed down. The damper the ground is at the time, the slighter must be the pressure used, or the growth of the tree will be retarded if not wholly prevented.

Where a stake is to be applied, it must be placed in its proper position before any ground is deposited on the roots. If driven in after the planting is finished, as is the usual practice, some of the roots and fibres will be cut or bruised, and the tree injured.—

The stake should be long enough to extend to the head or crown of the tree, and should have an inch auger hole bored through it five or six inches above its lower end, in which a pin of locust wood, a foot long, should be inserted, so as to project an equal distance on either side. This will add to the steadiness of the stake, and prevent it from being drawn out after the ground has become settled.

The tree should not be set deeper than it stood before its removal; at least not more than an inch or two deeper, especially if the soil be heavy—lighter soil will settle more. It can easily be seen how deep the tree stood previously. The upper roots, however, should be covered about six inches with earth, let the lower ones extend to whatever depth they may.

When a young tree, just taken from a nursery, is to be planted, it is not necessary to be particular about giving its branches the same exposure they had before. But in transplanting an older or bearing tree, it is of great importance that those branches which had a northern exposure, should be so placed again; and the northern side should therefore be marked, in such cases, before the tree is taken up.— In planting a young tree, however, it will be of advantage to give a southern exposure to those branches which appear to be the weaker, or to that side of the tree which has the fewer branches. The genial influence of light and heat will then conduce to modify and improve the shape and appearance of the tree in its subsequent growth.

It is never advisable to plant a fruit tree on a lawn or a grass plot. But if, for any reason, it be done, the hole should be dug two or three feet deep, and at least six feet in diameter, that the ground may thus be thoroughly loosened over a large space and the air have ready access to the roots. This area should also be kept free from grass and weeds, be mulched with saw-dust or pine leaves or covered with clean gravel, or be occasionally well hoed up. On beginning to dig the hole, the sod must first be carefully pared off and laid aside, to be inverted and placed in the bottom of the hole before inserting the tree. When so placed, it should be covered with some fine surface soil or mould to the depth of several inches, and the planting be then proceeded with as before directed.

In planting an orchard, the direction of the rows and the distribution of the various kinds of trees, is of great importance. The rows should so run as to permit the rays of the sun at noon to reach all the trees equally; and they should be so far apart as to allow the trees to develope themselves fully, according to their natural habits of growth. The trees themselves should be set in alternate ranges, or in quincunx order, thus—

in a row, thus

Trees of lower growth, such as peaches, apricots, nectarines, plums, quincees, should be set in the rows on the eastern side of the lot. In the next succeed-

ing rows, westerly, should be placed the apple trees, May duke and other cherry trees of low growth.— Then should follow pear trees, and cherry trees of taller growth; and if any nut trees are set out, they should be placed in the westernmost row, nearest the fence or hedge, where their shadows will be least injurious. There will thus be a regular gradation in the size of the trees in the several rows; and they will all, as far as possible, equally enjoy the benefit of the morning sun.

When transplanting a tree, the pruning knife must be freely used, if a handsome head is to be produced. The branches must all be shortened down to from two to five buds each, according to the number and condition of the roots. If a young tree have many branches, all the smaller ones, and such as are not desirably placed, must be cut off close and smooth; suffering only three or four of the finest and best placed limbs to remain, and shortening these down to from three to five buds. It must be borne in mind that each bud allowed to remain, is intended to produce a limb; and that the beauty of the future head or crown will depend entirely on the arrangement and distribution now adopted. The sap naturally pushes with most force towards the upper buds, not unfrequently passing the lower by, and allowing them to remain dormant or inert. If many buds are suffered to remain, the result of an inadequate supply, or too great diffusion of the sap, will be the production of feeble and sickly branches, which set fruit prematurely, and retard the growth or prevent the developement of the tree. Apple trees, moreover, should be so pruned as to produce a hollow or open crown.

The necessity of pruning trees freely when transplanting them arises, furthermore, from the fact that during the subsequent year their roots are to be renewed or reinvigorated. Delicate roots, the spongioles of which are yet to push their way in the ground, and then form and spread lateral fibres for the collection of nutriment, cannot of course send up such abundant supplies of sap, as the limbs and branches received before removal. Consequently, if the same number of these be permitted to remain, without due pruning or straitening, the roots may indeed supply sap sufficient to maintain life, but will themselves sustain injury from the effort; and the tree will long languish, and perhaps ultimately perish, from thus overtasking the roots. A grown tree, which has already borne fruit, is almost certain to be destroyed, if thus transplanted; and this fact alone shows the expediency of using the knife freely, even in the case of young trees. The larger the tree, the greater should be the quantity of wood taken off—particularly, if the roots be few in number and small in extent, or have unavoidably suffered much in the removal. Larger roots, which have been cut or broken off, should have the lacerated parts trimmed smooth; and

smaller roots that have been lacerated or crushed, should be carefully cut off.

When young trees are transplanted in the fall, it is not advisable to prune off at once all the branches which are designed to be removed, or even to shorten fully those which are intended to remain. It is better to delay the operation till March, when there is no longer danger that severe frost will penetrate the cut ends of branches and destroy the upper buds.

Orchards may be regularly manured, if it be done at the right season and in the proper manner; but nurseries should not be manured—or very slightly, if at all. Trees in the latter ought to be so treated as to secure their hardiness and durability in any soil or situation in which they may subsequently be placed. Those in an orchard, on the contrary, will occasionally need some fertilizer, to promote their due growth and developement and insure the production of liberal crops of fruit.

A piece of soft flannel or piece of old woolen sock dipped in water, may with great advantage be wrapped around the main root of a tree, which proves to be very deficient in smaller roots, when taken up for transplanting. It will long retain moisture, and promote the speedy exertion of fibrous roots. Trees which would otherwise almost certainly fail to grow, may be preserved by this simple application.

W.

GUANO.—We again request that some of our correspondents who have tested its value, will favor us with their observations and experience with Guano. We could readily transfer to our columns able articles on the subject, from writers in other sections, but we are very desirous of presenting the experience of some of our own farmers, and therefore repeat the request made in our last number. We hope some of correspondents will take up the subject.

WORK FOR AUGUST.—Dig under old rows of strawberry plants, or make new beds. Raspberry canes may be cut away when the fruit is gathered from them. Summer prune vines and trees. Root prune too luxuriant dwarfs. Bud all sorts of fruit trees.—Preserves, wines, &c., may be made, but require care in keeping. Dry spare fruits that are liable to decay.—*Waring's Hand book.*

ROSE INSECTS.—If our lady readers are desirous of keeping their rose bushes free from the small green vermin that so frequently infest them, the following remedy will be found a most effectual one: To 3 gallons of water add one peck of soot and one quart of unslacked lime. Stir it well—let it stand for twenty-four hours, and when the soot rises to the surface, skim it off. Use a syringe for applying it.

WINTER HERBS.—The best time for gathering herbs for winter use is when they are in blossom. If left till they are in seed, the strength goes to the seed.—They are best picked from the stalks, dried quickly (but not burnt) before the fire, and rubbed into powder, then bottled.

Horticultural Societies.

Proceedings of the Pennsylvania Horticultural Society.

The stated meeting of this association for the month of July, was held in the Chinese Saloon, on the 15th. The President in the Chair. The display on the occasion was excellent, especially so in the fruit department, which presented the greatest attractions, and consisted mainly of tempting Grapes from the President's houses comprised of seven dishes of choice kinds, the finest were the Muscat of Alexandria, White Sweet Water and Black St. Peters; delicious Apricots, some ten or more dishes; the Royal, Moorpark and Peche varieties from Mrs. John B. Smith's; the Moorpark from Wm. V. Pettit's, James Dundas, Robert Johnson's and Isaac B. Baxter's gardens; the latter also exhibited seedlings of his own. Plums of the Mirabelle variety, by Wm. Foster and Alex. Parker. Two varieties of Nectarines from John Lambert's. Pears, the Jargonelle and Muscat, from A. M. Eastwick's (Bartram's garden) From Mrs. Gratz the early Catharine and Muscat petit. Apples, the red Junecating from Bartram's garden. Ten varieties of Seedling Raspberries, by our indefatigable member, Dr. Wm. D. Brinkle.—Very fine Goosberries were exhibited by Isaac B. Baxter, Mrs. John B. Smith and Wm. S. Cleavenger. Currants, fine red and white from Miss Gratz; red from Mrs. N. W. Rose, and black from John Lambert's. A specimen of the Colong Cherry from J. R. Brinkle, an interesting dwarf species indigenous to the Rocky Mountains.

In the collection of flowering plants were many specimens of interest and beauty. Robert Buist's contained a handsome plant of *Lilium punctatum*, *Columnea Scheidiana*, *Veronica Lindleyana*, *Magnolia pumila*, etc. Among John Lambert's were fine *Amaryllis*, *Pentas carnia*, 10 varieties of *Fuchsia* with a number of others. John Sherwood's had *Stigmaphyllum ciliatum*, *Gardenia radicans*, *Justicia carnea*, etc. Also a table of that graceful genus the *Fuchsia* containing some dozen of well grown plants. From A. M. Eastwick's (Bartrams garden) handsome plants of *Hydrangea hortensis*, *Begonias*, *Calceolaria* and others. Edward Delevan brought a fine collection of *Achimenes* several of which were new and seen for the first time on our tables, a beautiful display.—The seedling Carnations by Mathew Mills and Joseph Mevius were good. The Bouquets and Baskets were pretty; a basket and hand Bouquet of Native flowers from Robert Kilvington was much admired.

The three displays of culinary vegetables did great credit to Thomas Wriggin's gardener; to Miss Gratz's and John Lambert's.

The following was the reports of awards :

By the Committee on Plants and Flowers—*Carnation*, for the best American Seedling to Mathew Mills: *Plants in pots*, for the most interesting collection, to James Roby, foreman to Robert Buist; for the second best, to Maurice Finn, gardener to John Lambert; for third best to Isaac Warr, gardener to John Sherwood. *Bouquet* for the hand, for the best, to Robert Kilvington: for the best formed of indigenous flowers, to the same; for the best Basket of cut flowers, to Henry A. Dreer: for the best indigenous flowers, to Robert Kilvington.

By the Committee on Fruit—*Grapes* for the best of white variety the muscat of Alexandria:—for the second best, the white sweet water and for the best of a black variety, the St. Peter, to John Ellis, gardener to Caleb Cope—*Apricots*, for the best, the Royal, to

Mrs. Jno. B. Smith; for the second best, the Moorpark to Wm. V. Petit. *Plums*, for the best the Mirabelle, to Abn. Parker; for the second best, the same variety, to Wm. Foster Burlington. *Figs*, for the best, to Wm. Johns. *Currants*, for the best red and for the best white, to John Gallacher, gardener to Miss Gratz, for the best black, to Maurice Finn, gardener to Jno. Lambert. *Gooseberries*, for the best to Isaac B. Baxter, for the second best to Mrs. Jno. B. Smith. The committee remarked with much satisfaction, ten varieties of seedling Raspberries by Dr. Brinkle, of fair flavor and remarkable size. Also a specimen consisting of a branch with the fruit of Colong Cherry, introduced from the Rocky Mountains, from the garden of John R. Brinkle, and a beautiful model of the Duchesse d' Angouleme Pear, prepared by Townsend Glover of Byrnsville, Dutchess Co., New York.

By the Committee on Vegetables—For the best half peck of Tomatoes, to John Gallacher, for the second best to Thomas Mecham, gardener to A. M. Eastwick. For the best and most interesting display of Vegetables by an amateur gardener, to Wm. Felton gardener to Thomas Wriggins; for the second best to John Gallacher gardener to Miss Gratz.

The Committee on Fruits reported that intermediately the following objects had been submitted to their inspection, viz:

On the 19th ultimo a beautiful collection of Cherries by A. M. Spangler, grown by Messrs. E. W. Carpenter, M. Ehrman and Dr. Parry of Lancaster, labelled Napoleon Bigarreau, White Grafton, Doubtful, Cumberland Seedling, May Duke, Morello, English Morello, and Kentish.

On the 25th ult., by Robert Buist, specimens of the Cherry Currant and a native yellow Raspberry.—The Cherry Currant was exceedingly fine and larger than heretofore seen by the Committee. The Raspberry had been received by him from the interior of the State as the white Blackberry.

On the 28th ult., by Mrs. A. M. Roe, superior Morello Cherries.

On the 2d inst., from J. B. Eaton, Buffalo, N. Y., specimens of a Cherry very large red foreign variety, supposed to be Bigarreau of Lyons. A fine large Cherry from Jonathan C. Baldwin, Chester Co., supposed to be a seedling variety but subsequently traced to Baltimore.

The Committee of Finance reported that they had examined the Treasurer's statement and compared vouchers and found the statement correct.

A series of amendments to the By-Laws were proposed which lie over for consideration.

On motion ordered that a silver medal be awarded to Dr. W. D. Brincké for having originated many Raspberries of great merit.

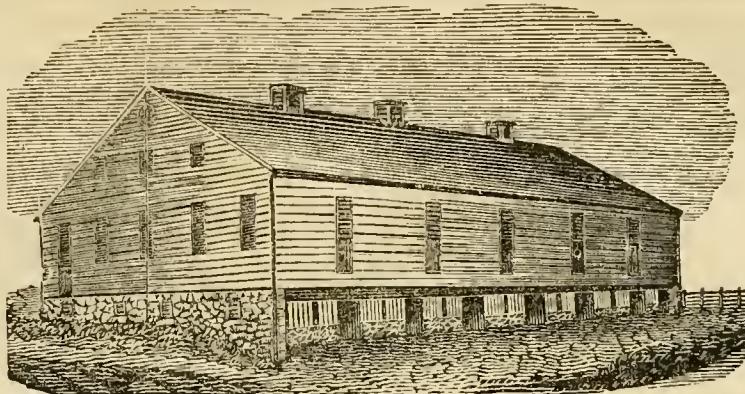
Ordered that the thanks of the society be tendered to Isaac B. Baxter for the relinquishment of the special premium of three dollars for the Col. Wilder Raspberry, awarded at the last stated meeting.

On motion adjourned.

THOS. P. JAMES,
Recording Secretary.

THE MAN who first introduced the fanning mill into Scotland was denounced as an atheist—he was getting up gales of wind when Providence willed a calm.

RATIONAL evidence is stronger than any miracle, whenever it convinces the understanding, which miracles do not.



A PENNSYLVANIA BARN, BUILT ON THE SWITZER PLAN.

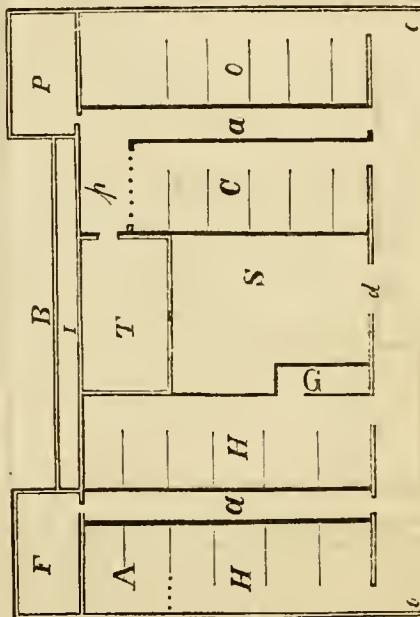
[We are indebted for the cuts and following description to the politeness of Theo. Fenn, Esq., of the Pennsylvania Telegraph, for whose paper it was prepared.]

Pennsylvania Barns.

However much before us in agricultural improvements generally, the Farmers of the States North and East of us may perhaps be, we claim for Pennsylvania the distinction of being the only State in the union in which the building of good, substantial, convenient and spacious BARNs is understood and practiced. Properly speaking, in other States, *they have no barns*—they don't know what a real good barn is—a stable or collection of stables, sheds and out-houses being their make-shift substitutes for them. This is a little singular, but is nevertheless true. A journey through New York and New England, will confirm our remarks. There is hardly a real barn to be seen. Evidences of plenty there are, and of excellent farming. You see good houses, beautiful shrubbery, admirable fences, clean and smooth fields, splendid cattle, plenty of *hay* and *grain stacks*—and lots of sheds and stables; but *no barns*. They will have to come into Pennsylvania, and take a pattern from some of our mighty bank-barns, looming out in the horizon like doubled-decked men-of-war beside sloops, or like churches beside log huts. As in our war vessels, so in our barns also, we have both *single* and *double-deckers*, the latter being tremendous affairs, that would make our eastern brethren open their eyes in astonishment. Above we present an engraving of one of the *single-deckers*—a most superb new Bank Barn, called a "Switzer" Barn, which was recently erected upon the farm of the Hon. A. O. HEISTER, on the Susquehanna, about three miles above Harrisburg.

This barn is one of the best and most convenient on the Switzer plan, in this vicinity. It is about one hundred feet in length, by about sixty feet in width, and proportionably high. It is built on a small hill side, so that the front or barn floor is on a level with the ground; while the hill is dug away and the stables placed beneath. The rear of this stabling is likewise on a level with the ground, though some ten feet below the front level. The cut represents this rear view only. As will be perceived, the barn has an *overshoot* of seven feet, the stone-wall being brought out flush the entire width, which is an improvement. The walls are eighteen inches thick, and

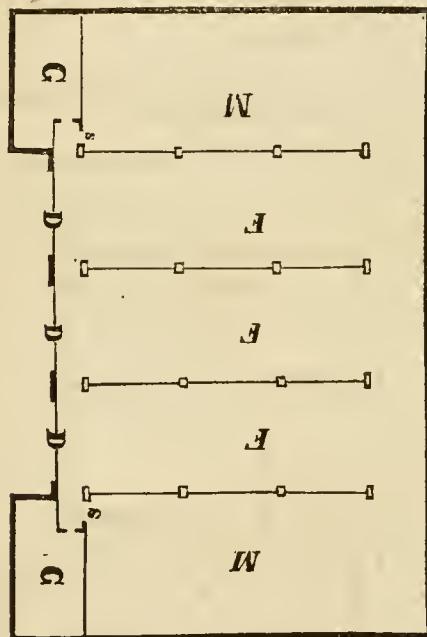
rise ten feet up to the front level. The following is a plan of the ground or stable floor:



The stone work is represented in the above plan, by parallel lines. B is a false breast wall three feet deep, a foot or two before 1, the real front wall. F is the feeding cellar, 10 feet by 20, where the feed for the horses is mixed and prepared. P is the potatoe cellar, 10 feet by 20, on the left hand. II. is the stable for the Farm Horses only, and A is a double stabled division of the same, shut off from the rest of the stable by a lattice door, intended as an *hospital* or *lying-in* room for mares, the whole being about 15½ by 42½: a and a are the feeding aisles or passagess, six feet wide. H on the right hand is another Horse stable, containing six stalls. Here strange horses are stabled. It is 15½ feet by 42½; and the ox and cow stables on the right hand side, marked O and C, are of like dimensions. G is a little room 4½ by 15½, where harness is kept. S is the straw room from which the cows in C can be directly fed. O is the stable for stock cattle. p is the passage to the turnip cellar. It is 7 feet wide, and separated from

the cow stable merely by double-latticed doors, 6 feet wide. T is the turnip cellar, 27 feet by 16. This and that for Potatoes and Feeding, have their floors well grouted—that is, stones are broken fine, evenly spread, and liquid lime poured over them, which makes them rat-proof. The stable floors are treated in the same way. In each of the aisles marked *a*, there is a continuous range of feeding lockers, on one side, in which oats, corn, or prepared feed may be kept ready for feeding at any time. In the passage marked *p*, are steps to ascend to the second floor. Hay is thrown down here, or through traps in the floor above the straw room: *d* is the 6 feet entrance into the straw room: *o, o*, is the stone wall projecting 7 feet, and supporting the overshoot.

The following is a plan of the second or front level floor:



G and G, are the granaries. D, D and D, are the barn doors, extending from ground to roof, F, F and F, are the threshing floors. M and M, are the hay or grain mows. The partitions dividing the floors and the mows are 43½ feet long, extending across the barn to within 7 feet of the rear wall, and commencing 3½ feet from the front: s, s, represents the stairways into the stables below. The turnip cellar below, is filled through the traps in this barn floor. The Granaries have an area about the same as the Potatoe and Feeding cellars below. The indentation between the granaries, up to the barn doors, is about 6 feet.—The roof overshoots this recess about 3 feet.

The cost of this barn was about \$1,500. It is weather-boarded on the outside—painted white—furnished with ventilators, lightning rods, and every minor improvement.

[The double wall (B) is necessary to prevent the great pressure of the bank from causing the inner wall to give way. The advantage of three threshing floors is, that the two lateral ones may at first be filled with the unthreshed grain, the central one being first used for its proper purpose in threshing from the side floors, which, in their turn, are used for threshing the grain stored in the side mows (these being seldom filled with hay) or in the loft over the floors.—Ed.]

THE HORSE.

AN ESSAY ON THE EXTERNAL FORMATION OR STRUCTURE OF THE HORSE, AND ON THE DISORDERS ORIGINATING THEREIN.

[Continued from page 111.]

The tail, in regard to the manner in which it is set on, is not to be overlooked: a horse that carries two good ends, (of which the head forms one, and tail the other,) always looks grand—is a perfect gentleman in his appearance. Above all others, the charger should possess this point in perfection, to coincide with the grandeur of his carriage in the ostentatious parade of a field-day. Hinc bellator equus eampto sese arduus insert. The tail, in most horses, should form, when elevated, a straight line, or nearly so, with the back. A gentle declivity of the croup, however, from the summit of the rump, denotes the blood-like quarter, and adds much grace to this part in the thorough-bred: should this line decline very much, the horse is said to be droop-arsed, and the quarters lose much of their beauty as well as their natural power. Nothing is so ugly in a full quartered horse, as to see the tail set on low down, issuing abruptly from the rump, as if a broomstick had been stuck in the place. The dealers who indiscriminately fig all, often spoil the sale of a horse of this description by curling the tail upward with a dose of ginger. Some horses carry a good tail naturally—others, by means of art, having undergone the operation called nicking. Gingery or peppery hackneys seldom require nicking: indeed, hackneys are often called, from this circumstance, cock-tails, in contradistinction to thorough-breds, who seldom or never carry any but a drooping-tail, better known by the name of blood-tail; a cocked-tail would be incompatible with a blood-quarter; hence it is that blood horses should never be figged or nicked.

The quarters may be full, small, or fine and blood-like. Full quarters are such as are possessed by cart-horses, large machine-horses, and hackneys able to carry great weight. These horses are wide in the hips, though their hips are but indistinctly marked, in consequence of being enveloped by large, coarse, flabby muscles. People are too apt to regard wide hips as an objectionable point, from their giving to the horse that appearance called ragged hips, which, indeed, are not only ugly, but denote bad conformation, though, of themselves, they denote good make; for the fact is that ragged hips are produced by a bad loin, and a lank, flat and weak quarter. Were these parts well formed, we should pronounce the hips to be of the best description. The small quarter is one that is often seen in a horse of this form; though the general contour of it may be regular and uniform, it is altogether disproportionately small when compared with the carcass: if it grows narrow toward the hinder part, the animal is often said to be goose-rumped. But, of all other structures, the blood-like quarter is the best adapted for speed: in it the tail is set on high up, and the hips are high and prominent, but not ragged; so that many of our racers are higher behind than before, the spaces between them and the points of the quarters great, as are also those between the latter parts and the stifles; the haunches want the plumpness and roundness of the full quarter; but, so far from being either lank or thin, are striped with bold and prominent muscles, which, being free from adipose and cellular substance that constitutes the flabbiness of those of the full

quarter, are so distinct, even through the skin, that we can distinguish where one ends and another begins. The stifles should project boldly forward, and have a perceptible irregularity of surface. The thighs are good, when long, thick and muscular; little hillocks, or rotundities, upon them, mark the course of muscles, and always denote great power; the nearer the angles which they form with the parts above and below approach to right angles, the more force the muscles can exert; ergo, the more powerful the horse. The hock, of all other parts is in the racer of the utmost importance; it should be broad, flat, and of large dimensions. The propulsion of the machine is effected chiefly by those muscles that are attached to the point of the hock; so that the more projecting this is, the greater the force they can exert, simply on the principle of the lever: as a man with a long oar can row with more facility and effect than he who uses the short one, or scull, so can a horse with broad, projecting hocks get over the ground with comparative ease to himself, and pleasure to his rider. The advantages the half-bred horse with good hocks possesses as a hunter, are of no less moment than those a good hock confers upon a racer: his great propelling powers will enable him to clear his raspers* with so much grace that the rider will find it a difficult matter to pound him,† and empowers him to make such play in the mud as will soon sew up his lank-thighed and straight-hocked competitors. The point of the hock cannot stand out too much; indeed, the greater its dimensions, altogether, the better, provided it be not gummy, or that its various bony projections and sinewy parts be distinctly seen or felt. If the hock is narrow, its point round, and not well defined, it is said to be straight, and from being very liable to curbs, is often called a curby-hock: should its point be directed inward, and the toes turned outward, the horse is cow-hocked or cat-hammed. As this is a part very liable to defect, as well as to original malformation, the nicest examination is required to detect all that may prove disadvantageous or injurious to its function, the proper performance of which is of so much importance that the propulsion of the whole machine depends chiefly upon it.

REMARKS ON THE PURCHASE OF A HORSE.—Having selected a horse whose make pleases us, our next consideration is his soundness; for though the horse dealer may declare that he is as sound as a bell, we are to take the phrase as one having various meanings, and not to be deterred from examining him, and narrowly, too, on that account. Sight, wind and limb, must be the uppermost objects of inquiry; for nine hundred horses out of a thousand are defective in one of these particulars. First, then examine his eyes, and do this before he comes out of the stable. Having placed him so that the light may fall upon the eyes but in one direction, see that they are of the same size, and equally full; that the haws are not prominent, and that one does not project more than the other; that the eyes are perfectly clear and transparent; and that the pupils, or apples of the eyes, are exactly alike in size as well as color. A sunken eye, or one over which the lids are partly closed—a projecting haw—an opaque or semi-opaque front;—a pupil dilated or a white or clouded one—are so many omens of disease, for which we should reject the prod as a *cupid*,‡ or, what is often worse, a

blinker, who will shy at all he meets with, and break your neck at the first poser* you ride him at. Having satisfied yourself in regard to his peepers, have him pulled out, and next proceed to examine his pipes. If good and sound, on being nipped in the gullet, he will utter such a sound as cannot fail to strike the ear as the emission of a good pair of bellows; but if his lungs are touched, and he is a piper, (that is, broken-winded, or having no wind at all,) he will give vent to a dry, husky, short cough. Should a horse be suspected of bad wind, however, the purchaser cannot do better than direct his attention to the flanks, which, under such circumstances, will work either much quicker than ordinarily, or heave deeply, and with great irregularity; they will be considerably longer in contracting themselves, in order to squeeze the wind out,† than in falling to let it in,‡ which they do, if he is a poser, quite suddenly. But, though not a piper, he may be a whistler, or what is worse, a roarer: the first may be known by the peculiar wheezing he is addicted to when put to sudden or long-continued exertion; the latter, by blowing his horn clamorously under similar circumstances; and either may be made to display itself, by the purchaser giving him a smart cut, or even feigning to do so with his bit of ash.

Thirdly, and lastly, as to the limbs. If, in passing your hand down his legs, we find any unnatural protuberance or puffiness, or it, in feeling first one leg and then the other, we find any difference between them, disease, more or less, is present; he may not be lame, but he is not clean upon his legs. Splints, windgalls, and ringbones may be present without occasioning lameness, but they are all unnatural, are considered blemishes, and are all to be regarded with a suspicious eye, as either denoting past hard work, or betokening future evils. On the same principle, a horse may have a spavin, and be only stiff from it at starting, or he may have a curb, or a thorough pin, and be perfectly sound; but these are still blemishes, and as such detract from the intrinsic value of the animal. In explaining the advantages resulting from good conformation, we are naturally led to make remarks en passant, on the disadvantages from bad; in pursuance whereof, I have shown why such a structure is bad, a question that necessarily entails upon us the mention of the disorders originating therein; i. e. the diseases to which such parts, in consequence of being malformed, are predisposed. INOPES.

* So called from planting all but the nonpareils.

† Expiration.

‡ Inspiration.

TO THE EDITOR OF THE FARM JOURNAL—DEAR SIR: I have a fresh Cow that gives her *quantum* of milk in the evening, and falls off in the morning, not giving more than half a pint. I may here state, that so far as can be discovered, she has not got it to give. It is not taken from her either by herself or by other visible means, as measures have been taken to detect them if any such existed. This state of things has continued for one week previously to which all was right. Can you or any of your subscribers account for it? The Cow apparently is in good health.

Yours, respectfully, A SUBSCRIBER.

[The cow is probably not in perfect health. Let her be fed when being milked. See Mr. Morris's remedy in our last number.—ED.]

* Rasper, a high and dangerous leap.

† Surrounded by inaccessible raspers.

‡ Transparent cornea.

§ A blind one.

The Cotswold Sheep.

The Cotswolds, until improved by modern crosses, were a very large, coarse, long-legged, flat-ribbed variety, light in the fore-quarter—shearing a long, heavy, coarse fleece of wool. They were hardy, prolific breeders, and capital nurses. They were deficient in early maturity, and did not possess feeding properties equaling those of the Down or New Leicester. To a cross with the latter variety we owe the modern or improved Cotswold. Having had no personal experience with the breed, I prefer quoting the descriptions of the later standard English writers, to the task of compilation.

"The Cotswold is a large breed of sheep, with a long and abundant fleece, and the ewes are very prolific and good nurses. Formerly they were bred only on the hills, and fattened in the valleys, of the Severn and the Thames; but with the inclosure of the Cotswold Hills and the improvement of their cultivation,

they have been reared and fattened in the same district. They have been extensively crossed with the Leicester sheep, by which their size and fleece have been somewhat diminished, but their carcasses considerably improved, and their maturity rendered earlier.—The wethers are now sometimes fattened at 14 months old, when they weigh from 15 lbs. to 24 lbs. per quarter, and at two years old increase to 20 lbs. or 30 lbs. The wool is strong, mellow, and of good color, though rather coarse, 6 to 8 inches in length, and from 7 lbs. to 8 lbs. per fleece. The superior hardihood of the improved Cotswold over the Leicester, and their adaptation to common treatment, together with the prolific nature of the ewes and their abundance of milk, have rendered them in many places rivals of the New Leicester, and have obtained for them, of late years, more attention to their selection and general treatment, under which management still farther improvement appears very probable.



THE COTSWOLD SHEEP.

They have also been used in crossing other breeds, and, as before noticed, have been mixed with the Hampshire Downs. It is, indeed the improved Cotswold that, under the term new or Improved Oxfordshire Sheep, are so frequently the successful candidates for prizes offered for the best long-wooled sheep at some of the principal Agricultural meetings or shows in the kingdom. The quality of the mutton is considered superior to that of the Leicester, the tallow being less abundant, with a larger development of muscle or flesh. We may, therefore, regard this breed as one of established reputation, and extending itself throughout every district of the kingdom."

"The degree to which the cross may be carried must depend upon the nature of the stock, and on the situation and character of the farm. In exposed situations, and somewhat scanty pasture, the old blood should decidedly prevail. On a more sheltered soil, and on land that will bear closer stocking, a greater use may be made of the Leicester.—

Another circumstance that will guide the farmer is the object that he principally has in view. If he expects to derive his chief profits from the wool, he will look to the primitive Cotswolds; if he expects to gain more as a grazier, he will use the Leicester ram more freely."

Cotswold sheep of good quality have been imported into the United States by Messrs. Corning & Setham, of Albany, and are now bred by the latter gentleman. I believe there were several earlier importations—but of their dates or particulars I am not advised.—*Randall's Sheep Husbandry.*

[It will be remembered that some of the best sheep raised in Pennsylvania are of the Cotswold crossed with the Leicester. Mr. B. Hood, of Chester county, and other gentlemen in various sections have tried them and found them, when crossed as above, a most valuable breed.—ED.]

THE FARM JOURNAL.

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and of Booksellers generally.

How to double the circulation of the Farm Journal.

We once read an article, (where, we do not remember,) in which the writer laid down certain rules, by which to get subscribers to an agricultural paper.—Some of the suggestions struck us so forcibly that the impressions made upon us have not yet been forgotten, and we now give them to our readers, with the hope that they will act upon them in behalf of the Farm Journal.

When you meet a neighbor who does not take an agricultural paper, instead of discussing some of the unprofitable topics of the day, introduce the subject of agriculture—the improvements making every day in farming, and let your neighbor know how much of this spirit of progress is attributable to "book farming."

If in reading the Farm Journal, you chance to find something not exactly adapted to your soil and location, do not on this account condemn the whole work, but remember that everything contained in it is not intended to benefit yourself only. Your neighbors' interests must be looked to a little. Sit down and read the whole of it carefully, and our word for it, you will find something to interest and perhaps benefit you, and if in reading you chance to meet an article that will be of service to your non-subscribing neighbor, read it to him, or lend him the number that he may read for himself.

Should you meet with a valuable suggestion (and every farmer will meet with many such) and put it into practical use; when you have seen and tested the value of it, do not keep it a secret, but let your non-subscribing neighbor know what it is, and that you learned it in the Farm Journal.

If you feel desirous of getting up a club for the Farm Journal in your vicinity, take the subscription paper in your hand—head the list with your own name—when you meet a neighbor tell him of the advantages of agricultural papers—point to the improvements those farmers are making who subscribe for and read them—tell him of the advantage they will be to his family—if he is a Pennsylvanian, ap-

peal to his State pride—make him aware of the fact that the Farm Journal is the only strictly agricultural journal published in the State—that its articles are written principally by practical men, familiar with the soil of Pennsylvania and the proper mode of its culture, and be careful to impress upon his mind that by making one of your club list, he will receive the Journal for one year at a cost of only *seventy-five cents*, and in a form fit for binding, and that at the end of the year he will have a volume of three hundred and eighty-four pages, replete with valuable and interesting information. By this means four out of every five will subscribe, and in a little while your club will be full.

Perhaps, good reader, you will ask, "why should we take so much trouble on ourselves?" To speak candidly it would not pay you very well. But, kind friends, remember, that we should not live wholly for ourselves. Our neighbors have a claim upon our regards—the great agricultural interests of our noble State are not yet half developed—Pennsylvania does not occupy the position she should, and it is your duty, as we feel it to be ours, to labor for her advancement. Will you not assist us? After the first year you will have no difficulty, for the day is coming when scientific agriculture, or "book farming" as it is called, will so far take the precedence of the old, worn out practice, that few men will hesitate to subscribe.

FINE WOOL.—We were shown, a few days since, a sample of wool, which for fineness exceeds any that we have ever seen. It was taken from the fleece of an imported German buck, the property of Dr. J. Trissler, of Vienna, Ontario county, New York. The entire fleece weighed ten pounds four ounces. Dr. T. imported the buck himself, and paid for him \$300. As we understand it is the Dr.'s intention to remove to Lancaster county, we hope he will make it a point to bring this valuable animal with him.

A GENEROUS OFFER.—Mr. Samuel Pelton, a gentleman who feels a deep interest in horticultural pursuits, has authorized us to say that during his stay in the Genesee valley, where he now is, he will make arrangements to have forwarded to Lancaster, cuttings and scions of the finest fruits of that region of country; and that they will be furnished to those desiring them, at the mere cost of transportation. This is very liberal on the part of Mr. P. and we hope the offer will be embraced by many of our fruit growers.

A band of emigrants from Sweden, numbering one hundred and eighteen, passed through Boston lately on their way to the west, where they intend to engage in agricultural pursuits. The procession was led off by thirteen wagons filled with baggage, with the women and children on the top. The men followed, many of them with their guns.

Constitution of the Pennsylvania State Agricultural Society.

We publish below the Constitution of the State Society, and the names of its officers. We would at the same time, press upon those who have not already done so, the importance of becoming members. If Pennsylvania is ever to assume her rightful position in an agricultural point of view, she can do so only through the medium of such an organization.—We are not among those who are continually underrating the skill of our farmers and artisans; our confident belief being, that Pennsylvania farming will compare favorably with that of any of her sister States. It has not been the want of thorough and practically applied knowledge of farming and its kindred pursuits, that has given our State a reputation for being somewhat less advanced in agriculture than New York, Massachusetts and others, but it is the fact that the yeomanry of Pennsylvania have not boasted so loudly of their proficiency. Were the immense yields of some of our noble farms as faithfully recorded, the portraits of our fine stock as frequently given, and the principle of putting "the best foot foremost" as generally adopted as by our northern neighbors, there would be less cry about the backwardness of Pennsylvania agriculture.

It is for the purpose of convincing the world that such is the case, that the Fair or Exhibition to be held at Harrisburg, under the auspices of the State Society, has been proposed, and it is the earnest hope of every friend of agriculture, that our farmers and mechanics will properly appreciate the opportunity afforded them of rebuking those who have sneeringly pointed to Pennsylvania as greatly behind the age. We predict, that if any thing like a fair representation of the agricultural and mechanical skill of our citizens (to say nothing of the taste and ingenuity of our ladies in all that relates to household economy) be given, that hereafter there will be fewer fault-finders. It is with a deep, longing desire, therefore, to have the farmers of the Keystone, placed in their rightful position before the agricultural world, that we urge one and all to prepare their contributions for the coming exhibition. Ample preparations have been made for the accommodation and display of all that may be brought, and nothing will be left undone to render the whole affair one that will reflect credit upon all concerned.

Then let the hands of the State Society be strengthened, and its efforts ably and cheerfully seconded.—Let the yeomanry come to the rescue, and the 23d, 24th and 25th days of October, will be a proud era in the history of Pennsylvania.

CONSTITUTION.

The name of the society shall be the Pennsylvania State Agricultural Society. The objects of this society are to foster and improve agriculture, horticulture, and the domestic and household arts.

SECT. 1. The society shall consist of all such persons as shall signify to the Executive committee their wish to become members, and shall pay to the treasurer, on signing the Constitution of the society, not less than one dollar; and annually thereafter not less than one dollar; and also of honorary and corresponding members.

The officers of county agricultural societies in this state, or delegations therefrom, shall be members *ex officio* of this society.

The payment of twenty dollars shall constitute life membership, and exempt the members so contributing from all annual payments.

SECT. 2. The officers of the society shall be a president, a vice president from each Congressional district, three-fourths of whom shall be practical agriculturists or horticulturists, a treasurer, a correspondent in secretary, a recording secretary, a librarian, an agricultural chemist and geologist, and such assistants as the society may find essential to the transaction of its business; an Executive committee consisting of the above-named officers, and five additional members.

Duties of the Officers.

SEC. 3. The President shall have a superintendence of all the affairs of society. In case of the death, illness, or inability of the president to perform the duties of his office, the Executive committee shall select a vice president to act in his stead, who shall have the same power, and perform the same duties as the president, until the next annual election.

Vice Presidents.

It shall be their duty to take charge of the affairs of the association in their several districts; to advance all its objects, to call upon farmers to report as to the condition of agriculture in their neighborhood; to ask for information as to the modes of cultivation adopted by different farmers, and as far as in their power to make known the resources of their districts, the nature of its soil, its good geological character, and all such matter as may interest farmers in every part of the State.

Treasurer.

The Treasurer shall keep an account of all moneys paid into his hands, and shall only pay bills when audited and approved by the Executive committee; each order for payment must be signed by the president or chairman of the Executive committee.

Corresponding Secretary.

The duty of this officer shall be to invite a correspondence with all persons interested in agriculture, whether in the State of Pennsylvania, or elsewhere, but especially with our consuls in foreign countries, that new seeds, vegetables, or live stock may be introduced, and their fitness for cultivation and propagation in our climate be tested. At each stated meeting of the society he shall read his correspondence, which shall, either the whole or such parts as may be selected by the society, form a portion of the transactions.

He shall also correspond with the president or other officer of each State society in the United States, at least twice in the year, for purposes of combined and mutual action, and to be informed of the result and progress of each others efforts; also, to invite mechanics to forward models or implements for examination and trial.

Recording Secretary.

The recording secretary shall keep the minutes of

the society and of the Executive committee; at the close of each year he shall prepare for publication such parts of the minutes and transactions of the society as may be designated.

Librarian.

The librarian shall take charge of all books, pamphlets, &c., belonging to the society, and shall act as eurator to preserve seeds, implements, or whatever property the society may possess.

Executive Committee.

The Executive committee shall transact the business of the society, generally; shall superintend and direct the publication of such of the reports and transactions as they may deem proper, and shall designate the time and places for annual exhibitions, regulate the expenditures, examine all accounts, and keep such general charge of the affairs of the society as may best promote its interests.

They shall select their own chairman, and meet monthly; five members shall form a quorum.

They shall call special meetings of the society when necessary.

Annual Meetings.

SEC. 4. The society shall meet annually, on the third Tuesday of January, at Harrisburg, when all the officers of the society shall be elected by ballot for the ensuing year, and until another election.—They shall also hold a general meeting at the time of the annual exhibition, and special meetings whenever convoked by the Executive committee.

Fifteen members shall form a quorum for the transaction of business, but no member in arrears shall be entitled to the privileges of the society.

SEC. 5. This Constitution may be altered or amended, at the annual meetings in January, by a vote of two-thirds of the members in attendance.

PRESIDENT.

FREDERICK WATTS, *Cumberland.*

VICE-PRESIDENTS.

GEO. W. WOODWARD, *Honorary Vice-President.*

1 Congressional District,	Peleg B. Savery,
2.	" Joseph R. Ingersoll,
3.	" Caleb Cope,
4.	" James Gowen,
5.	" John Kennedy,
6.	" William Stewart,
7.	" Abm. R. M'Ilwain,
8.	" J. B. Garber,
9.	" Col. Henry Shubert,
10.	" Conrad Shimner,
11.	" Jaeho Drumheller,
12.	" Hon. Wm. Jessup,
13.	" Jacob Gundy,
14.	" A. O. Hiester,
15.	" J. S. Haldeman,
16.	" Finlaw M'Cown,
17.	" Jon. M'Williams,
18.	" Henry W. Beeson,
19.	" Wm. A. Stokes,
20.	" Wm. Patterson,
21.	" Hiram Hultz,
22.	" Morris Leech,
23.	" James Miles,
24.	" David Ralston.

Corresponding Secretary—Dr. Alfred L. Elwyn, Philadelphia.

Recording Secretary—Robt. C. Walker, Allegheny.

Treasurer—Geo. H. Bueher, Hagerstown, Cum. eo.

Librarian—Dr. Luther Reily, Harrisburg.

Analytical Chemist and Geologist—Chas. B. Trego, Philadelphia.

An Executive Committee to consist of the above-named officers and five additional members, to wit: Algernon S. Roberts, Philadelphia county; John Evans, York; Dr. John Irwin, Juniata; Isaac G. M'Kinley, Harrisburg; David Mumma, Jr., Dauphin.

Good Farming Implements.

Every farmer should not only provide a complete set of farming implements; but that set should be of the most approved construction, and the best quality. It is wretched economy to place awkward, unwieldy tools in the hands of your laborers, when light, convenient, and equally durable ones may be had for the same price. But admitting the price of the convenient implement to be double that of the inconvenient one, the prudent farmer will gladly pay the difference. He thereby, not only spares his workmen, but in the end secures a greater amount of work. With what care should the farmer select his plows. How earnestly endeavour to procure those of the lightest draught, and easiest management. The comfort of his horses demands this, and the extra amount of time and care consumed in the selection, will be more than repaid, by the good condition of his horses or oxen, and the superior manner in which his work is done.

Many farmers are in the habit of purchasing inferior implements for their boys to use. This, again, is miserable policy, and no prudent farmer will ever be guilty of it. If men cannot perform good work with bad implements, how much less inexperienced boys. Give the boys tools of the best kinds, and where practicable, let them be adapted in size to their strength and capacity for handling them.

Every farmer should provide himself with a complete set of Horticultural Implements, and these too, should be of the most improved kinds. One great reason why gardens are so wretchedly cultivated,—why weeds are permitted to outgrow and smother valuable plants—why fruit trees become barren and decay, is, the want of a good set of Horticultural implements, with which to guard against these evils. How frequently does the farmer in a leisure hour, observe the wants of a favorite tree—that it needs pruning—that his hedge needs trimming—that a favorite fruit should be budded, or a thousand other things which should be attended to, but are not, because the suitable tools are not within reach.

Every farm should boast a tool house so arranged, that every implement should have its proper place assigned it; and a fixed principle with the master should be to see and require every thing to be in its proper place as soon as the workmen are done with it. A systematic arrangement of this kind fully carried out, would in a short time become a

fixed habit, and the advantages of it appreciated only by a comparison between the condition of the farm where good implements are kept and carefully preserved, and one where they are never found.

Education and the Agricultural Press.

The following truthful remarks on the subject of agricultural education and the importance of the agricultural press, we copy from the admirable address of Dr. J. A. Kennecott, of Northfield, Ill., delivered before the American Pomological Congress, at Cincinnati, on the 3d of October, 1850. We regret that we have not space for the whole of the address, as it abounds in useful and interesting information.

The first and last thing wanted by the farmer, is *education—knowledge*. In this we can assist him—and what we can do we should do in this connection.

Agricultural and horticultural societies, have done much towards waking up and encouraging all who labor for bread—the mechanic, as well as the farmer and pomologist. At the shows of these societies, our brethren see what others have done, and what science may do. And the people of the “universal Yankee nation,” are very apt to believe, that “what man has done, man can do again.” Thousands are annually startled from their old routine practice, by what they see at these exhibitions, and try to imitate or excel the products of the farm, or the work-shop, which have thus excited their professional emulation.

Let us therefore help to establish county and State societies through the land, and let us add one feature to them, which most of those in existence now lack—not exactly lectures, but brief observations on every new or extraordinary subject. This may be done, by a system of familiar questions put to every exhibitor, by the proper officers of the society, and publicly answered.

I have read reports of such public conversations, in the proceedings of the AMERICAN INSTITUTE, New York city, and some other societies. This mode of conveying information, though not always as clear and reliable as written statements, possesses many advantages. Let it be generally adopted, and much good will result therefrom, and the persons who cannot or will not read, may possess themselves of a few facts on which to base their own experiments. I have heard of the adoption of this plan in small neighborhoods, without shows, and with the happiest and most encouraging results.

But after all, our principal engine, is the *agricultural press*. The press may have been brought into existence by the societies, though that admits of doubt. The press is, however, the organ, and the very soul of the associations. Man is a vain animal, and loves to see himself “in print,” and he often works hard, and effects much good, with that powerful, that unacknowledged desire.

The agricultural press must be sustained. Public opinion is the true sovereign of the Anglosaxon; and he will give even money, (which is too often his God,) to propitiate it. Say what we may about the press being but the mirror of public opinion, it certainly *creates* as well as reflects that mighty power.

Let us sustain then our agricultural journals. If we cannot give money, as politicians do to theirs, we can give a little time. Many of us have influence and powers of persuasion. Let us exert these with our neighbors, and procure legitimate subscriptions—knowing as we do, that for every dollar we induce

our brethren to disburse, they will receive the value of ten, in useful knowledge.

The agricultural press is now the most efficient and legitimate advocate of common school and specific agricultural education; and this is a subject of more general and vital importance, than all the agricultural bureaus and societies in the world.

The farmer's son must be educated for his profession—the mechanic for his calling, and the *VOTER for the perpetuation and extension of our free institutions*, and “the manifest destiny” of the Anglo-saxon race.

And better than our sons, should we educate our DAUGHTERS. If “the boy is father to the man,” the MOTHER not only bends the twig, but her influence for good or for evil, is often the joint product of both parents, or the future career of the son, as palpable as the successful graft of the pippin on the crab, or a melting pear on a native thorn.

Do not for a moment, suppose that I believe the mind of man like this paper, on which I can write what thoughts I please. Men are as different in mental organization as in features. And yet, even idiots are susceptible of some education; and pippins will sometimes grow when inoculated on crabs, and pears on thorns, though not on hemlocks or black jacks.

Scientific education can do much towards redeeming a bare or sterile mind; and it can do every thing with that on which God smiled at its inception and development. But without education, this child of the deity will be but as the statue in the block of marble, or this paper, before it was blotted by my uneducated speculations, and chance thoughts, which the very system I advocate, might have converted into gems of beauty and usefulness.

Agricultural education may be thought, (as some who live by agriculturists have said,) “one of the humbugs of the age.” Still it is a principle that I hope to see tested before I die. I would ask no larger hold on fame, than I could rest on the broad results of such a system as I advocate. But, alas, my powers in this, as in most things, are far below my enthusiasm and my appreciation of the great thoughts of other men. But, thank God, great men and men in power see this matter in its true light, and have dared to countenance and sustain it, even against self-nominated legislators, who neglect our interests, and self-constituted manufacturers of public opinion, who underrate or slight them.

A First Rate Drill.

We take pleasure in commanding to such of our readers as may desire a first rate drill, those of Moore's patent, manufactured by Messrs. Lee, Pierce & Lee, of Ercildoun, Chester county. They are superior in all that constitutes a good drill, and cost only a little more than half the price of the drills heretofore used. Their simplicity will at once recommend them, apart from the fact that the work performed by them is fully equal to that of any other with which we are acquainted.

BLUE ROSE.—The horticulturists of Paris, says a correspondent of the N. Y. Express, have succeeded by artificial crossings in obtaining a natural rose of a blue color, which is the fourth color obtained by artificial means—the yellow, or tea rose, the black, or purple rose, and the striped rose, being all inventions, and the result of skilful scientific gardening.

What we have done--What we intend doing.

When we commenced the publication of the Farm Journal, we promised that no effort should be spared to render it worthy a generous support. Agreeably to that promise, we have labored with the ability we possessed to lay before our readers such matter as we conceived best adapted to interest and benefit them. We have secured the assistance of some of the most reliable pens in the State, and have good reasons for believing the Journal a publication which every farmer in Pennsylvania may read with profit. This much we have done.

What we intend doing. To say that we will make the Farm Journal better than it has been, would perhaps be saying too much. But, good reader, "*we will try.*" The list of our correspondents is rapidly increasing in numbers and ability. Our scientific and practical men are giving us the benefits of their observations and experience. A highly valued and capable correspondent has offered to translate for us an article from the German, on Agricultural Chemistry, which will occupy portions of several succeeding numbers of the Journal. This article contains the latest summary of this all-important subject, from a most competent source, and will, in itself, be worth five times the price of the Journal to our readers.—The various subjects treated of, will be fully illustrated, which will materially increase its value.

In addition to this, the articles on Entomology, will be continued, with entirely original illustrations, showing the habits and character of noxious insects, and in that familiar style which renders them so valuable to every reader who cultivates trees or plants.

This and much more that will give a permanent value to the Journal, we intend doing. Will our friends sustain us? We do not complain of the support we have received. It has been liberal beyond our most sanguine expectations; but we must have more subscribers. Our expenses of publication are heavy, and, kind reader, our family must live. We have a plan to propose, a very simple plan—a favor to ask. We have said what we will do, and having said so, will make good our word. In return for these renewed efforts and increased expenses, all that we ask is, *that each one of our present subscribers will send us the name of one other subscriber.* How easily might this be accomplished? How comfortable it would make us feel. What a vast amount of good would be accomplished by it, for the farming interests of Pennsylvania. Only one subscriber each.—Remember that, *only* one, and the Farm Journal will go on prosperously.

THE CORN CROP, in Pennsylvania, is as promising as could be desired, and there is every indication that it will be as abundant as the wheat and rye.

STRAWBERRIES.—Those who purpose planting Strawberry beds, should do so during the present month or early in September.

The Harvest.

Surely our farmers have reason to rejoice and be glad. The harvest is over, and a more bountiful one they have never been blessed with. The grateful earth has repaid their toil, by yielding her increase, and their barns and granaries are now filled to overflowing. Never within our recollection has there been such a harvest. The yield has been most abundant, while the crops, so far as we have heard, have all been secured in the finest condition. The weather during the whole of the harvest, was all that could have been desired, so that little difficulty was experienced, and far less expense than usual incurred.

Severe storms occurred in some sections, but did not do much damage, nor continue sufficiently long to interfere materially with the progress of the harvest. Our neighbors of New York, Maryland and Ohio, are rejoicing over their abundance; the crops in those States, having been equally good.

TOBACCO.—The cultivation of tobacco has never been carried on to as great an extent in Pennsylvania as this season. The high prices which good Pennsylvania tobacco commanded last year, has given this impetus to its cultivation, and caused many persons to engage in it who never before attempted it. The most extravagant rents have been paid for land, to be used for raising tobacco. In some sections of Lancaster county as much as seventy-five dollars per acre has been asked and freely given. The present indications are, that the coming crop will not be an average one, and consequently, there must be heavy losses to the growers. With a few exceptions, all the fields we have seen give poor promise of a good yield. We hope, however, that the balance of the season will prove more propitious, and that the crop will be an average one at least.

THE STATE FAIR.—A letter from one of the Committee of arrangement, informs us that preparations of the most ample character will be made at Harrisburg, for the accommodation of exhibitors. This is as it should be. There will doubtless be an immense display, and nothing should be wanting on the part of the Committee to give every contributor sufficient room for the favorable exhibition of his articles.

We have received two barrels of Kentish's Artificial Guano, the fertilizing qualities of which we intend trying. It comes to us recommended by a host of highly intelligent farmers and gardeners. It was the high character of the recommendation that induced us to purchase it. We will try it, and give the honest results. If what is said of its powers as a manure be correct, it undoubtedly commends itself to farmers as the cheapest and best fertilizer known.

SEVERAL able and interesting communications have been crowded out. They shall appear in our next.

Book Notices.

The Fruit grower's Hand book; a concise Manual of directions for the selection and culture of the best Hardy Fruit in the garden or orchard. By William G. Waring, Boalsburg, Centre county, Pa., 1851. 16 mo. pp. 134.

We have seldom met with a book to correspond as well with its title as this Hand book does. It commences with tables, having various fruits arranged in the order in which they ripen, so that the orchardist, in making his selections, is enabled to have a succession of bearing trees during the entire fruit season. Then follows a descriptive list of various fruits in alphabetical order, the qualities being indicated by varying the size of the type in such manner that the eye immediately recognizes the superior kinds. The book is illustrated with many well executed wood cuts which will be of great use in enabling the reader to distinguish the varieties.

The diseases and insects which infest fruit trees are noticed, and every necessary information that can be compressed into a volume of this size. The pronunciation of many of the foreign names is given, but we notice on page 73 that the German *z* is given *dz* instead of *ts*.

The second part of the book is entitled "How, when, and where to plant," and is accordingly devoted to cultivation, including an outline of vegetable physiology.

We recommend this manual to all who are interested in the cultivation of fruits, and congratulate the citizens of the interior counties of Pennsylvania upon the advanced state of horticulture amongst them, as indicated by the publication of such a meritorious work in their midst.

Journal of the Franklin Institute—devoted to Mechanical and Physical science, civil engineering, the arts and manufactures, and the recording of American and other patented inventions.

This large and valuable monthly journal is edited by Prof. J. F. Frazer, and published by the Franklin Institute at \$5.00 a year. It is well illustrated by plates and figures, and cannot well be dispensed with by those interested in the subjects to which it is devoted. We extract the following translation from the French.

Method of Preserving Vegetable alimentary substances. By M. Masson, chief gardener to the Central Horticultural Society of France. The author has arrived at a simple and very practical method for drying vegetable substances without altering their constitution, and for reducing them to a very small volume without losing their flavor or nutritious properties. The process consists in drying them at a low temperature in stoves heated to about 95° Fahr., and in a very powerful compression by hydraulic press. The first operation deprives the substances of the superabundant water, which, for certain vege-

tables, such as cabbages and roots, amounts to more than 80 or 85 per cent. of their weight in a fresh state, The second reduces their volume, augments their density, making it equal to that of pine wood, and thus facilitates their preservation and storage. It is sufficient to soak them in warm water from thirty to forty-five minutes, when they re-absorb all the water which they have lost; they are then boiled for an hour or two according to their nature, and season in the usual way. A number of experiments made by the Navy department establish the quality and perfect preservation of these products after voyages of four years.

Report of the American Pomological congress held in the city of Cincinnati on the 2d, 3d, and 4th of October, 1850. Published by the Ohio State Board of Agriculture. Columbus, 1851, pp. 79.

This Congress is made of members from different parts of the United States and Canada, and the report of its last meeting contains various matters of interest. Fruits brought together and compared before such a Congress will eventually be known by the same name over the Union, so that a great source of error and confusion will be avoided. An important feature of these meetings is the vote for and against certain varieties of fruit, the list having become so enormously large that it is next to impossible for a purchaser to select; or a nurseryman to supply the kind likely to be called for. The Congress has already placed a considerable number of varieties upon their list of fruits unworthy of being cultivated, but the corresponding list of what constitute the *best* fruits, advances very slowly, owing to the great diversity of opinion among those who have their favorites.

The list of "State Fruit Committees" is full except with respect to Rhode Island and North Carolina.

The officers of the meeting were *Prest.*—W. D. Brinckle, M. D., Penna.; *Vice Prest's.*—J. A. Kennicott, Ill.; Lawrence Young, Ky.; James Dungall, Canada West; A. H. Ernst, Ohio; James Sigerson, Mo.; P. B. Cahoon, Wis.; Lewis F. Allen, N. York; Joseph Orr, Ia.; Ewd. Tatnall, Del.; Rt. Rev. Bishop Elliott, Ga.; J. G. Drayton, S. C.; *Secretaries.*—F. R. Elliott, Ohio; F. Barry, N. York; J. A. Warder, Ohio.

The American Journal of Pharmacy. Edited by Wm. Proctor, Jr. Philadelphia. Published Quarterly at \$2.50 a year.

This Journal is devoted to Pharmacy, Chemistry, Zoology, Botany, Mineralogy, &c., in their relations with Materia medica; and we are glad to find that advertisements of quack medicines are not admitted. In a sensible article on the recent homicide case in Philadelphia, the following remarks are made.

"Much has been written and published in the newspapers about the *necessity* of physicians writing their prescriptions in English as a remedial policy for these distressing occurrences. Were these re-

formers better informed on the subject, they would withdraw their suggestion as being pregnant with evils far greater than those they propose to remove. For instance, take the root of *Hydrastis canadensis*, one physician would direct, 'Take of *golden seal root*,' another, 'Take of *yellow root*,' a third, 'Take of *orange root*,' and a fourth, 'Take of *puccoon root*,' and they would all mean the same thing. Would not the license thus given tend to multiply the difficulty already existing? We think so."

Domestic Economy.

TO FRY YOUNG CHICKENS.—As this is the season for young chickens, we command the following recipe for frying them, to our lady readers. Take your chickens from the coop, just when you are ready to clean them. Chop or wring off their heads—instantly disembowel them—wash them thoroughly with hot, (not cold) water, and drop them into a pan of boiling hot, nice sweet lard. Let them fry until nicely browned, then serve them with rich cream gravy.—Having once tried this plan, those who glory in fried chicken will never try any other. It is the ne plus ultra mode.

TO FRY POTATOES.—The usual practice of frying potatoes until they are brown and crisp, is an abominable one. Fried potatoes to be of the right sort, should be boiled, suffered to get cold, cut in slices, sprinkled with salt and pepper, and thrown into a pan containing an abundance of hot fat. They should be left in the lard only a sufficient length of time to heat them thoroughly, then taken out, thrown into a cullender to drain, and served up as soon as ready. Try this plan.

TO CURE A GOOD HAM.—Take 12 hams of common size, 8 lbs of brown Sugar, crystallized Saltpetre half a pound, and five pounds fine Liverpool Salt. Rub the hams well with mixture, and lay them in a cask, with the skin down, where they should remain for a week. Then make a brine strong enough to bear an egg, add two or three quarts of ley from hickory ashes, and refine the whole by boiling and skimming. Cover your hams with the brine—let them remain three or four weeks, then hang them up in a smoke house, and smoke well with hickory wood.

TO MAKE LEMON WHEY.—Pour into boiling milk as much lemon-juice as will make a small quantity quite clear; dilute with hot water to an agreeable smart acid, and put in a bit or two of sugar. This is less heating than if made of wine, and, if only to excite perspiration, answers as well.—*Lady's Book.*

HOW TO DESTROY FLIES.—Pour a little simple oylem (an article sold by druggists) into a common tumbler glass, and place in the glass a piece of cap paper, made into the shape of the upper part of a funnel, with a hole at the bottom to admit the flies. Attracted by the smell, they readily enter the trap in swarms, and by the thousands soon collected prove that they have not the wit or the disposition to return.

AN EXCELLENT WASH FOR THE MOUTH.—A wash for the mouth is made of half an ounce of tincture of myrrh and two ounces of Peruvian bark. Keep in a phial for use. A few drops in a glass of water are sufficient.

Melon Bug Bane.

MR. EDITOR:—I send you the recipe for a mixture which I think Mr. Keller will find effectual for the destruction of the bugs which annoy him and his neighbors so much. I have found it so for many years, and therefore confidently recommend it.—Should it answer the purpose, the fifty dollars offered may be forwarded to you.

1 lb. Black walnut leaves cut small.

1 lb. rasped quassia wood.

½ lb. soot from chimney.

1 gallon water.

½ pint potash soap, (family soft soap.)

Boil for thirty minutes, then add six gallons of water, pour the whole into a keg and after having macerated for twenty-four hours it will be fit for use, and may be strained through a muster bag by expression. To be sprinkled on melon, squash, cucumber vines, and upon all other plants infected with bugs and insects, by means of a brush or the rose of a watering can early in the morning or at close of the day.

J. F. H.

TO KEEP CLOTHES PURE.—Lay between the folds of garments that have acquired an unpleasant odor from being laid away for some time, pieces of newly made charcoal. The charcoal will absorb the odor and render the clothes sweet and nice.

OUR TERMS--READ THEM.

In order that the FARM JOURNAL may be placed within the reach of every one who feels interested in the progress of Agriculture, we ask attention to the following terms:—

SINGLE COPIES,	—	\$1 00	Per Annum.
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It is not required that all papers in a club should be sent to one office. We will mail them (in wrappers,) to as many different offices as may be necessary. We make this arrangement in order that persons residing in different neighborhoods may unite, and form large clubs, and thus secure the "JOURNAL" at the very lowest club rates.

Specimen copies of the JOURNAL will be sent on application, *Post-paid*, to the publisher.

Post Masters, are by law, authorised to remit subscription money to the publisher, *free of postage*.—Particular attention is asked to this fact, as it will save expense both to subscribers and publisher.

Our Terms are **CASH IN ADVANCE**. The exceedingly low rate at which the Journal is furnished renders this imperative. Subscriptions may be sent at our risk, and money at par where subscribers reside, will be taken. Where the sum to be sent is large we prefer that a draft should be procured, if possible.

Subscribers and Post Masters are invited to act as Agents. A receipt will always be sent with the first number of the copy subscribed for.

All letters must be addressed, *post paid*, to the publisher.

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Lancaster, Pa.

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THE subscriber offers for sale 4000 young and thrifty Strawberry plants at low prices. This and the following month being the proper time to form new beds to bear fruit the following year.

J. F. HEINTSH

Aug. 1, 1851.

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AGENCY

for the purchase and sale of improved breed of Animals.

STOCK Cattle of all the different breeds, sheep, swine, poultry, &c., purchased to order, and carefully shipped to any part of the United States, for which a moderate commission will be charged. The following are now on the list, and for sale, viz:

Thorough bred Short Horns and Grade Cattle.

do	do	Alderney	do	do
do	do	Ayrshire	do	do
do	do	Devons	do	do
do	do	South Down Sheep.	do	do
do	do	Oxfordshire	do	do
do	do	Leicester	do	do

Swine and Poultry of different breeds. All letters post paid will be promptly attended to. Address AARON CLEMENT, Cedar st., above 9th. Phila.

August 1, 1851.

JOURNAL OF THE FRANKLIN INSTITUTE, of the State of Pennsylvania, for the promotion of the Mechanic Arts.

THE oldest Mechanical Periodical extant in America, is published on the first of each month in the City of Philadelphia. It has been regularly issued for upwards of twenty-five years, and is carefully edited by a committee of scientific gentlemen appointed for the purpose, by the Franklin Institute.

The deservedly high reputation, both at home and abroad, which this Journal has acquired and sustained, has given it a circulation and exchange list of the best character, which enables the Committee on Publications to make the best selections from Foreign Journals, and to give circulation to original communications on mechanical and scientific subjects, and notices of new inventions; notices of all the Patents issued at the Patent Office, Washington City, are published in the Journal, together with a large amount of information on Mechanics, Chemistry, and Civil Engineering, derived from the latest and best authorities.

This Journal is published on the first of each month, each number containing at least seventy-two pages, and forms two volumes annually of about 432 pages each, illustrated with engravings on copper and on wood of those subjects which require them.

The subscription price is Five Dollars per annum, payable on the completion of the sixth number; and it will be forwarded free of postage when five dollars are remitted to the Actuary (postage paid) in advance for one year's subscription.

Communications and letters on business must be directed to "the Actuary of the Franklin Institute, Philadelphia, Pennsylvania," the postage paid.

WM. HAMILTON,

Actuary, F. I.

August 1, 1851.

TO FARMERS, PLANTERS,

MARKE GARDENERS & OTHERS. PREPARED OR ARTIFICIAL GUANO—Manufactured only by KENTISH & CO.

Depot No. 40, Peck Slip, New York.

THIS manure is so combined, that the Ammonia and other fertilizing gases are absorbed, fixed, and are given out to vegetation only as it requires them. No rot, mildew, worm, fly or other insect can approach it: an important consideration to farmers generally, but particularly in potato planting. It will be admirably adapted to the renovation, restoration and fertilizing of such lands as have been worn out.

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It may be used with the greatest advantage on Corn, Potatoes, Wheat, Tobacco, Garden Vegetables, Rye, Oats, Green House Plants, Flowers, Vines, Wall Fruit, &c., and more than a thousand certificates from the most celebrated Farmers and Gardeners, can be shown, all testifying in the highest terms to its great value as a fertilizer. A pamphlet containing these certificates can be had, by applying to the manufacturers. THE PRICE IS ONLY ONE CENT PER POUND. It is put up in bbls. averaging 235 lbs., or in casks, from 1000, to 1400 lbs.

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Aug. 1, 1851.

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1000 Tons Dry Patagonia Guano,

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The quality of the above is unsurpassed, and can be recommended with confidence to farmers and others in want of the articles.

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4-7m.

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PERUVIAN and Patagonia Guano, for sale in large or small quantities, in barrels and bags, on reasonable terms.

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Analysis Phosphate of Magnesia 45.4

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"The 45.4 parts of Phosphate of Magnesia contains 23.75 parts of Phosphoric Acid. The guano is of excellent quality, containing nearly one half of matter of the highest value in Agriculture, besides one fourth of organic matter in a good state for application to the soil."

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GUANO,

PERUVIAN and Patagonia Guano for sale in lots to suit purchasers, by J. CASSIDY & SON.

No. 121, South Water st., a few doors above Dock st., Phila.

July 1. 4-ly.

BERKSHIRE PIGS and South Down Sheep of Pure Blood, for sale by JAS. THORNTON, Jr.,

Byberry, Philadelphia Co.

TO FARMERS !
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RESPECTFULLY invite the attention of Farmers and others to their Establishment for the manufacture of Farming Implements and especially to their celebrated

IMPROVED GRAIN FANS,

which they confidently assert will do more work in a shorter space of time, and with less labor, than any other Fan now in use. These Fans, wherever introduced, have given complete satisfaction, and a large number of testimonials could be procured, testifying to their superior merits.

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Having had many years' experience in the best shops in the country, they are prepared to do work of a superior quality a little cheaper than any other establishment in the State. They will warrant all their work to be what it is represented. A warrant given with every Grain Fan, giving the purchasers the privilege of returning it, should it not do good and quick work.

They will deliver them, free of expense, any distance within fifty miles of the manufacture. Their Shop is at the junction of the Marietta and Columbia Turnpike, Lancaster, Pa., where they will be happy to have Farmers call and examine for themselves. Price of Fans, No. 1, large size, \$24.00
" " 2, small size, \$22.00

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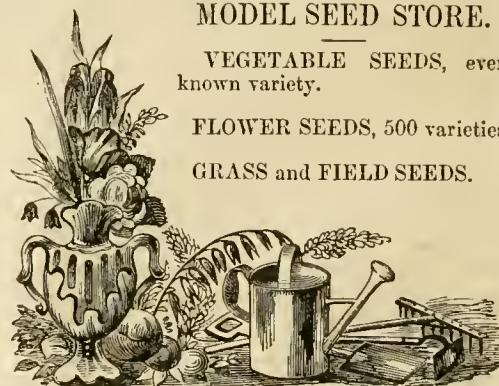
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VEGETABLE SEEDS, every known variety.

FLOWER SEEDS, 500 varieties.

GRASS and FIELD SEEDS.



Agricultural and Horticultural Implements.

THOMAS F. CROFT, Proprietor.

Agent of Penna. Farm Journal.

May]

**Chester County Agricultural
WAREHOUSE & SEED STORE,
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THE subscribers in connection with their extensive Nursery Garden, and Green House establishments, have erected a large Warehouse, and will keep constantly on hand and for sale, a complete assortment of *Agricultural and Horticultural Implements*, consisting, in part of Horse Powers and Threshers, Plows of different sizes and patterns, among which are the celebrated "Eagle Self-sharpening," Prouty & Mearns' Centre Draft, Subsoul, Sideshill, &c., &c., Harrows, Cultivators, Wheat Drills, Seed Sowers, Corn planters, Fanning Mills, Corn shellers, Straw and Hay Cutters, Churns of various sizes and patterns, Harvesting tools of every description; in a word, every implement necessary to the Farmer and Gardener, and of the most approved kinds and patterns can be had at our Warehouse. Also, field, grass, and garden seeds of every variety.

At our Nursery will be found our usual large assortment of Fruit and Ornamental Trees, Shrubbery, Grapevines, Green House Plants, &c., &c.

PASCHALL MORRIS & CO.

Westchester, Pa., June 1, 1851.

**DIXON & KERR'S
POULTRY BOOK.**

JUST PUBLISHED,

A TREATISE ON THE HISTORY AND MANAGEMENT OF ORNAMENTAL AND DOMESTIC POULTRY. By Rev. Edmund Saul Dixon, A. M., with large additions, by J. J. Kerr, M. D. Illustrated with SIXTY-FIVE portraits, from nature, engraved expressly for this work.

CONTENTS.

The Domestic Fowl.

The Rearing and Management of Fowls.

Eggs—Their Color, Form and Sex.

Eggs—Their Preservation for Culinary Purposes.

Eggs—Their Preservation for Incubation.

Varieties of the Shanghai Fowl.

The Cochin China Fowl.

Burnham's Importation of Cochin China Fowls.

The Malay Fowls, sometimes (though erroneously) called Chittagong.

The Pheasant—Malay Fowl.

The Guelderland Fowl.

The Dorking Fowl—Colored Dorkings.

The Spanish Fowl.

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The Smooth-legged Bantam.

The Dung-hill Fowl, the Dominique Fowl, Colonel Jacques' Chicken Coop, Devereux's Method of Rearing Chickens without a Mother, and Cope's Letter on Early Chickens.

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The Pea Fowl.

The Ring-necked Pheasant.

The Turkey.

The Guinea Fowl.

The Mute Swan (*Cygnus Olor*).

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The Hong Kong or China Goose.

The Bremen Goose.

The White-fronted or Laughing Goose.

The White China Goose.

The Bernicle Goose—The Brent Gooee.

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This work is well bound in muslin, and is printed on the best paper. The illustrations are engraved in the most elegant manner, from original and accurate drawings, and the whole is one volume of 480 pages duodecimo, price \$1. A few copies have been colored after nature. Price for the colored copies, \$2.50. For sale by all Booksellers, and by the Publishers.

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SMITH'S RENOVATING OINTMENT is an invaluable remedy for horses, in the cure of the following diseases: Fresh Wounds, Galls of all kinds, Sprains, Bruises, Kingbones, Foll Evil, Wind Galls, Spavins, Sweeny, Fistula, Strains, Lameness, Founder'd Foot, Cracks, and Scratches.

The above articles are to be had in most of the Cities and principal Villages throughout the United States, and the Canadas.

For sale, wholesale and retail, at John H. Smith's Depot, No. 123 Fulton street, (2d floor,) New York.

Price, 25 cents per box for the Ointment; 50 cents for the Horse Renovating Powders. For sale by DR. ELY PARRY, April—6m) East King street, Lancaster, Pa.

The BEST and MOST VALUABLE

Agricultural Implements & Machinery

Exhibited at the State Fair in 1850, will be seen by the award of Premiums below:

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55 Light Street, Baltimore, by the Maryland State Agricultural Society,

At their 3d Annual Fair, held in Baltimore 23d, 24th and 25th October, 1850.

For the best Plow in the Plowing Match, the Prouty & Mears No. 5½ \$40.00

For the best Plowing with Ox Team, same plow, (Special Premium) 200

For the best Plow on Exhibition, Ruggles, Nourse, Mason & Co's No. 3, 1st Premium, 8.00

For the best Railway Horse-power, Whitman's Improved, 1st Premium, 15.00

For the best Hay Press, 1st Premium, 25.00

For the best Cornsheller, 1st Premium, 4.00

For the best Field Roller, 1st Premium, 8.00

For the best Corn-Stalk Cutters and Grinders, 1st Premium, 5.00

For the best Churns, 1st Premium, 4.00

For the best Hay and Manure Fork, 1st Premium, 2.00

For the best Hay Rakes, 1st Premium, 2.00

For the best Cultivator, 1st Premium, 4.00



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20,000 Apple Trees, of *Extra size*, 8 to 10 and 12 feet high, including every variety worthy of cultivation.

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10,000 Cherry Trees, 6 to 8 feet and over, among which will be found all the desirable and choice varieties.

A large stock of handsome, well grown trees of Peach, Apricot, Nectarine and Quince, in every variety. Also,

Grapevines, Native and Foreign; Raspberries, Gooseberries and Currants; Strawberry Plants and Esculent Roots, such as Asparagus, Rhubarb, Seakale, &c., of the most approved kinds.

Pear and Quince, Cherry on Malahab, and Apple on Paradise stocks—for Pyramids or Dwarfs for garden culture, and embraces all the kinds that succeed on those stocks.

Deciduous and Evergreen Ornamental Trees and Shrubs.

100,000 Deciduous and Evergreen Ornamental Trees, embracing all the well known kinds suitable for street planting of *extra size*; such as Sugar and Silver Maple, Chinese Alantus, Horse Chestnut, Catalpa, European and American Ash. Three Throned Acacia, Kentucky Coffee Tree, Silver Ash Tree, American and European Basswood or Linden, American and European Elm, in several varieties, &c. Also all the more rare and select, as well as well known kinds suitable for Arboretums, Lawns and door-yard planting, &c.; such as Dodder and Lebanon Cedars; Araucaria or Chilean Pine; Cryptomeria japonica; the different varieties of Pines, Firs, Spruces, Yews, Arborvitae, &c.

WEPPING TREES—New Weeping Ash. (*Fraxinus leptiscarpa pendula*) the Old Weeping Ash, Weeping Japanese Sophora, Weeping Elms, (of sorts) Umbrella Headed Locust, Weeping Mountain Ash, Weeping Beech, &c., &c.; together with every variety of rare Maple, Native and Foreign; Pear, Pine and Peppermint and Cherry; Chestnuts, Spanish and American; Tern sage Copper Beech; Judas Tree, Larch, Gum Tree, Tulip Tree, Oak, Orange, Paulownia, Mountain Ash, (American and European) Magnolias of sorts, with many other things—including some cut varieties of Shrubs, Vines, &c., for which see Catalogue, a new edition of which is just issued, and will be forwarded to all post paid applicants.

A large quantity of Arborvitae for Screens, and Buckthorn and Osage for hedge plants.

The above will be sold on as liberal terms as similar stock can be purchased elsewhere. For further particulars we would again refer to priced Catalogue. A liberal discount will be made to persons who buy, to sell again, and extensive planters, on their own account.

April

Seed and Agricultural Warehouse,

191st Market Street, Philadelphia.

WE offer to our friends and customers, the largest assortment of Agricultural implements, Garden tools, and Seeds, ever offered in this Market, consisting in part of the following, viz.:—Prouty and Mears' Patent highest premium self-sharpening Houghs, right and left handed side hill Subsoil, of various sizes, of superior materials and workmanship, warranted to give satisfaction, or the money returned—Four highest premiums awarded to these Ploughs at the New York Fair, 1850. Also, Beach and Car Share Ploughs; Spain's improved Barrel Churn, constructed in such a manner that the dasher may be removed from the inside of the Churn by simply unscrewing the handle from the dasher. Hay, Straw and Corn-stack cutters, in great variety, among which may be found Hovey's superior premium straw-cutter, of every size.

Also, Horse-power Threshing Machines, Fan Mills, Corn Shellers, Cheese Frusses, Seed Planters, Dirt Scrapers, Sugar Mills, Ox Yokes and Bows, Turnip Drills, Horse Rakes, Swain Scythes, Concaved Hoes, Spring Tempered Cast Steel, Oval and Square Manure and Hay Forks, Pruning Shears and Chisels, Beach and Bar Share, repairing pieces and castings, Peruvian, Patagonia and prepared Guano, together with a complete assortment of grass, garden and field seeds, all of which will be sold at the lowest possible prices, at 191st Market street, Philadelphia.

April 9—tf

PROUTY & BARRETT.

IMPORTANT TO FARMERS

And Threshing Machine Makers.

THE subscriber respectfully begs leave to inform the public that he has lately perfected a new Threshing Machine and Horse Power, which in point of strength, durability, lightness of draught and convenience in moving, is not surpassed or equalled by any Machine in the United States; he also confidently affirms that no Machine of its strength and durability can be afforded as low—The invention of this Machine has been the result of several years experience and hard study. We do not claim to have discovered any new principle in philosophy—but we do claim to have discovered a plan by which old philosophical principles are more correctly and advantageously applied than on any other Machine. This invention is veined by a caveat.

These Machines can be had at Israel W. Groff's Machine Shop and at Prime & Colestock's Sash Factory in North Duke street, Lancaster city, at retail or by wholesale on the most reasonable terms.

The Power weighs 600 pounds. It is made entirely of iron with Steel Journals, and is warranted to hold 8 Horses should it any time be necessary to use so many. From 2 to 4 Horses are a sufficient number for common threshing. We are about getting up one much lighter for Shop purposes that will be the cheapest and most convenient thing in use; it might also be used with 2 or 3 Horses for threshing; the Powers and Cylinders and Concave can be had by the Machine makers throughout the country on the most reasonable terms.

All orders directed to the subscriber at Lancaster city will be thankfully received and promptly attended to.

Lancr. April

SAMUEL PELTON, Jr.

Gilmore's Bee-Hive, &c.

THE attention of Bee culturists is invited to this improved plan.

Mr. Gilmore is a gentleman of great experience and success in the culture of Bees; his improvement is the result of many years trial; his result has no parallel in the history of the past.

The Agent of the "Pennsylvania Farm Journal" is the Agent of Gilmore's System of Hiving and Feeding the Bee in this State.

The price of a Hive and Fixtures, \$3.00

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County " " \$30 " \$200.

A Talk about the Honey Bee," a defense of Gilmore's system, contains, also, testimonials, awards of Premiums to Gilmore, from the leading Fairs and Institutes in this Country; 12 cents single; \$1.00 per dozen—gratuit to patrons.

Circulars sent to any applicant. Address, post paid.

April—tf

J. B. MAYNARD,
Lancaster, Pa.



HAVE been distributed throughout the Union. The concern has been in successful operation for upwards of *Sixty Years*, and may be said to have grown up with the City of Philadelphia, where it was at first located. It has been gradually enlarged to meet the growing wants of the public, and is now, as it ever has been, the most extensive of its kind in this country. The grounds in cultivation being ten-fold greater than those of any similar concern in the United States.

As the Seeds sold by the proprietor are (with slight exception) of his own raising, he is, consequently, enabled to *Warrant* them, a matter of importance to the purchaser of an article, the quality of which cannot be determined by the eye. Descriptive Catalogues in English and German gratis.

Also for sale, Implements for Farm and Garden in large variety.

LANDRETH'S Agricultural Ware House.

Sign of the Plough, 65 Chestnut st., Philadelphia.

Seed and Agricultural Warehouse.

No. 29. Market Street, Phila.

WHERE the subscriber has opened an extensive assortment of **GRASS AND GARDEN SEEDS**, of his own raising, or recent importation, and warranted to be as represented.

He is, also, manufacturing all the most approved Agricultural Implements, among which he would call the attention of Farmers to a new article of *Plow*, of his own invention, called *Cast Steel, Extending Point, Self-Sharpening, Surface and Subsoil Plows*, which for durability and ease of draft is yet unequalled.

The great advantages these Plows possess over all others, are their peculiar construction and the substitution of *Cast-Steel* in the place of *Cast-Iron*, which only wants to be seen to be appreciated; all of which will be sold on the most reasonable prices by

May, 1851.

C. B. ROGERS.

"Get the Best."

ALL young persons should have a standard DICTIONARY at their elbows. And while you are about it get the best; that Dictionary is NOAH WEBSTER'S, the great work abridged. If you are too poor, save the amount from off your back, to put it into your head.—*Phrenolog Journal*.

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This volume must find its way into all our public and good private libraries, for it provides the English student with a mass of the most valuable information, which he vain seeks for elsewhere.—*London Literary Gazette*.

The very large and increasing demand for this work, affords the best possible evidence to the publishers that it is highly acceptable to the great body of the American people."

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\$500 to \$2,000 a Year.

1000 AGENTS WANTED.

IN all the States of the Union, to canvass for the following Important and Valuable Works, which are sold by subscription. We have now about two hundred Agents in the field many of them clearing from two to eight dollars per day. It will be seen that they are all of a very popular and desirable kind, and calculated to please almost every taste. For further particulars apply (post paid) to the publishers.

DERBY & MILLER,

Auburn, N. Y.

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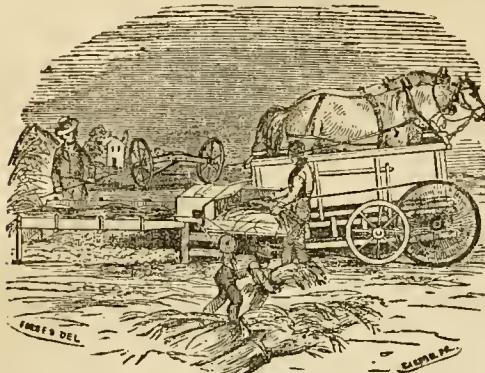
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Kettlewell & Davison's Salts against Guano.

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THE deep interest now taken by Agriculturists in all descriptions of manure, would seem to justify any expedient, by which fair and unprejudiced experiments may be made of the various descriptions of manure at this time attracting the attention of the public. In view of this, and the undersigned honestly believing that the Chemical Compound, manufactured by them, is the best manure of any knowledge he had for a Corn Crop; challenges Guano to the test upon the following condition:—He will forfeit One Hundred Dollars, to be presented to the Maryland Agricultural Society, if any advocate of Guano will do the same, that the Renovator compounded by Kettlewell & Davison, will produce upon any soil, the largest crop of weighed corn, without regard to the size of the stalk, provided the President of the State Agricultural Society will select some person, in his judgment qualified, to superintend the experiment. The nature of the soil to be described, so that each party can direct the mode of application; two barrels of the Salts to be used per acre, costing \$6, and 300 lbs. of the Guano, costing \$7 20, the party making the experiment to receive the manure free of cost. And the same amount against any manure as a top dressing upon timothy or clover.

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Kettlewell & Davison again call the attention of Agriculturists to their various Chemical Manures—and in so doing, they would be insensible to common gratitude, if they failed to express their profound acknowledgments for the constant and increasing demand which flows in upon them for their simple and compound manures. Each season has greatly increased their sales, extending as far south as South Carolina.

They can give no stronger evidence of their faith in the virtues of their manure, as the best known for a corn crop, than the tenders they make above; and the certificates which they herewith present. In the offer of a test, it is not the amount involved, but the willingness to challenge result, that speaks their integrity and confidence. We could add any amount to the testimony we publish; but if the names we refer to, do not command confidence, no additional number could. We have never boasted of the quality of our article, we have been content to leave a decision to time, demand and experiment, that has been in our favor—hoping, if we have less of "Bi-phosphates," the public would discover it, as they would if it was found we had more of "sand" than any thing else.

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We keep constantly on hand this valuable manure. Bones, with a proper portion of the Sulphate of Ammonia, dissolved in Sulphuric Acid. The Chemists of this country and Europe have been pressing this mode of using bone-dust upon the attention of farmers, with great zeal and ability of recent years. Every experiment has confirmed the truthfulness of their theory; and we hazard but little in saying that in a very brief time it will be used in no other way. It is prepared so as to be sown similar to the salts, at the rate of one or two barrels to the acre. The price of this article is \$4 per barrel. Let the farmer who dares, try it at a less expense than the old mode of using bone-dust.

TOBACCO GENERATOR.

■ This is a chemical compound, made expressly for the growth of the Tobacco plant. We will call more special attention to it at the proper season.

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We have constantly on hand Chemical Residuums of every description. Full information of which can be had by application to us.

COMBINATION OF GROUND PLASTER AND POTASH.

This is a preparation made for soil deficient in Potash, of which deficiency there is, unfortunately, too many instances in much of our Maryland land. For this compound we are indebted to the suggestion of an accomplished Agriculturist of Prince George's county, who may at some future day present the result of his experiment. The price of this is \$2 50 per barrel.

DIRECTIONS.

The mode of using the Renovator is simple, inexpensive, and requiring but little labor. The farmer must bear in mind, that in the preparation of his soil he shares an equal responsibility in testing the merits of any manure. Land negligently or badly cultivated given no manure a fair chance. How to put land in order he ought to know better than we can teach him; and if he don't know, should learn as speedily as possible. The land, then, in order—if one barrel to the acre is used—and this quantity depends upon the quality of the land—it should, for grain be sown broad cast, and slightly harrowed in.

If two barrels are used, one as stated above, and the other as a top-dressing upon the wheat or rye, early in the spring at the commencement of the first thaw. Upon grass it should be sown broad-cast upon the timothy or clover. On corn, either broad-cast or in the hill. Where two barrels are used, one each way.

■■■ PRICE of the RENOVATOR, \$20 PER TON, or \$3 PER BARREL.

April—11

W. B. WILEY, Job Printer, Lancaster, Pa.

PENNSYLVANIA FARM JOURNAL

VOL. 1.

LANCASTER, PA., SEPTEMBER, 1851.

NO. 6.

THE FARM JOURNAL.

S. S. HALDEMAN, Editor.

Entomology, No. 5.

BY THE EDITOR.

The coleopterous insects termed *Lamellicornia* have the end of the antennæ thickened, and the joints of this part formed of three or more flat plates closing against each other like the leaves of a book.

Some of these insects are very destructive to vegetation, by eating the roots, leaves and flowers. The roots are eaten by the larvæ, which are *grubs*, and are well known as thick white worms bent in a semi-circle, which causes them to lie upon one side. Various kinds are formed in dung, both in the larva and perfect state, some are formed in decaying vegetable matter, and others attack roots when larvæ, and leaves and flowers in their perfect state.

Some of these larvæ are very destructive to pastures and growing grain, from the extent to which they destroy the roots. This may be judged from the fact that in England two men collected eighty bushels of the perfect insects during the short period of their appearance.

In this country various species of *Phyllophaga* are found, most of which are hurtful. They are generally of a chesnut or brown color, and may be recognised from the figure. In digging or plowing in April, they are frequently met with, ready to make their exit.

It is possible that early spring, or late fall plowing, by throwing the grubs within reach of the frosts, when too helpless to bury themselves deeper, would destroy a great many of them. Various birds, as the crow and blackbird, follow the plowman to feed upon them; and it is probable that moles devour them, as these little animals feed upon food of this kind.



PHYLLOPHAGA.

Hand picking, with burning or scalding, is the best mode yet known to destroy these insects in their perfect condition. They are generally inactive in the morning, when they be shaken from the fruit trees and vines, without inducing them to fly. Being nocturnal, this inaction may arise from full feeding, and a disposition to rest after a night of activity.

Lotteries.

Various States of the Union passed laws against lottery gambling, even before it was ascertained that these contrivances could be conducted in such a manner as to convert them into swindling engines of the first class, and make lottery dealers more dangerous members of society than counterfeiters or professed gamblers.

Among the means adopted for protecting the population, the law of Pennsylvania forbids the *advertising* of lotteries, because it was foreseen not to do this, was merely to change the scene of the plunder from Pennsylvania to a neighboring State.

These remarks are made in consequence of having received through the mail, two documents, one of which is a sheet called *Semi-monthly Courant*, published by nobody and ostensibly at Jersey city. Under the garb of a newspaper, it is a trap baited with lottery advertisements by one Carroll, who has a den in Courtlandt street, New York, whence he annoys the citizens of Pennsylvania. The other document comes as a letter and is of a similar character. It purports to be from one Leary, of Frederick, Maryland. Although there is said to be honor among *****, neither of these favors was prepaid.

We caution our readers against encouraging lotteries, even as an experiment. If any one can spare the amount necessary to buy a ticket, he had better bestow it in charity. The entire system is criminal; the ticket-seller instead of showing himself openly like an honest man doing an honest business, curtains his window, and his deluded victim skulks behind a screen to hide himself from the passers by.

Congress institutes or permits lotteries, and higher-law virtue never protests; probably because it has discovered the perfect morality and honesty of the lottery system; like the newspapers of Washington city, in which the drawings are advertised and sent into the anti-gambling States.

Franklin Marshall College.

We are gratified to inform our readers that the trustees intend to found an agricultural professorship in this institution, which should be a strong argument in favor of the college in Lancaster county, the proposed seat of its new location. We hope therefore that the citizens of the county at large will feel sufficient interest in this important undertaking to induce them to subscribe liberally towards its accomplishment.

In what state should Lime be applied?

W. H., of Bedford, wishes to know, "whether lime should be plowed under in a caustic state, rather than being exposed to the atmosphere previous to the plowing down?" The most satisfactory answer we can give to this query will be found in Johnson's Agricultural Chemistry, from which valuable work we copy the following:

The form and state of combination in which lime ought to be applied to the land depend upon the nature of the soil, the kind of cropping to which it is subjected, and on the special purpose which the lime is intended to effect. The soil may be heavy or light, in arable culture, or laid down to grass, and each of these constitutes a different mode of procedure in the application of lime. So the lime itself may be intended either to act more immediately or to be more permanent in its action—or it may be applied for the purpose of destroying unwholesome herbage, of quickening inert vegetable matter, of generally sweetening the soil, or simply of adding to the land a substance which is indispensable to its fertility. The skilful agriculturist will modify the form and mode of application according as it is intended to serve one or other of these purposes.

From the considerations already presented to you (3) in regard to the changes which quick-lime undergoes in the air, it appears to be expedient,

1^o. To slake lime quickly, and to apply it immediately upon clay, boggy, marshy, or peaty lands—upon such as contain much inert, or generally which abound in other forms of vegetable matter.

2^o. To bents and heaths which it is desirable to extirpate, it should be applied in the same caustic state, or to unwholesome subsoils which contain much iron (sulphate of iron), as soon as they are turned up by the plow. In both these cases the unslaked lime-dust from the kilns might be laid on with advantage.

3^o. Where it is to be spread over grass lands without destroying the herbage, it is in most cases safer to allow the lime to slake spontaneously, rather than in a covered pit. It is thus obtained in an exceedingly fine powder, which can be easily spread, and, while it is sufficiently mild to leave the tender grasses unharmed, it contains a sufficient quantity of caustic lime to produce those chemical changes in the soil on which the efficacy of quick-lime depends.

4^o. Where lime is applied to the fallow, is plowed

in, well harrowed, or otherwise mixed with the soil, it is generally of little consequence in which of the above states it is laid on. The chief condition is, that it be in the state of a fine powder, and that it be well spread and intimately mixed with the soil. Before these operations are concluded the lime will be very nearly in the state of combination in which it exists in spontaneously slaked lime, whatever may have been the state of causticity in which it has been applied.

You will understand that the above remarks apply only to localities where burned lime is usually or alone used for agricultural purposes.

Should manure be immediately plowed down?

W. H., of Bedford, Pa., asks, whether it is better to plow down manure immediately after it is taken from the compost heap or barn yard, than to let it be exposed to the influences of the air, wet weather, heat, &c., on small heaps, (as is usually done,) sometime before plowing under.

Although much has been said and written in favor of surface manuring, we cannot but think the practice a bad one. The virtue of barn yard manure, it is well known, is greatly lessened by being exposed to the action of the sun and atmosphere, on small heaps as is usually the case. When the manure is spread, and permitted to lie exposed any length of time on the surface, the effects are still worse. The rich juices which constitute the chief value of manures, are exhaled by the sun, or washed away by rains, leaving a residuum, the fertilizing principles of which have been greatly lessened, if not almost wholly destroyed. Manure should be spread and plowed under as soon as possible after being taken from the barn yard.

We shall be glad to have this question thoroughly discussed, and therefore hope that some of our correspondents will take up the subject.

PLUMS AND THE CURCULIO.—The editor of this paper succeeded last year in having an abundance of plums where they had year after year previously, all dropped off. Vials of sweetened water were hung in the trees, and insects which had stung the fruit were mostly attracted by the sweetened water. The vials were repeatedly emptied of the water and insects, and re-filled with sweetened water during the time from the flowering of the trees, till the ripening of the fruit. The fruit did not all escape, but the trees were well loaded with sound and well ripened fruit although much dropped off prematurely. These trees stand in a dark sandy loam soil, on a S. E. exposure, in a peach orchard one hundred and fifty feet above the valley.—*Western Agriculturist.*

SOME of the articles under the names of chocolate, cocoa flakes, &c., consist of coarse dirty sugar, ground with potato starch, rough bran flour, tallow or grease, and ground musty biscuits, with sometimes an introduction of red brick-dust.

LET it not be forgotten that the best tilled land is always more moist, and bears drouth better than land of the same quality when poorly tilled.

Communications.

Guano.

WE have received the following communications on Guano, in answer to our request for the results of experiments:

PHILADELPHIA, Aug. 5, 1851.

DEAR SIR:—In your number for this month, you ask for the results of experiments with guano. I will give you my experience with that celebrated manure.

I tried it on grass, clover, potatoes and turnips, in the spring of 1845. As the experiments were given in detail in the Farmer's Cabinet, Sept. No., for that year, I will do no more now than to mention the results in a general way.

My success, in every experiment, was fully up to the character of the manure. The next year I tried it on wheat, at the rate of three hundred pounds to the acre, but no effect was seen, unless the ruin of the crop on the portion which received the guano, be taken as the result of that experiment.

I formed several conclusions from the results of my experiments, that I will take the liberty of giving to your readers, for their consideration.

It is too delicate and dangerous a manure for general use, for where it does no good it does much mischief. You might just as well expect vegetative action from electricity or gunpowder as from this article. The three conditions absolutely necessary be observed, when designing to use it, make it inconvenient to employ, unless in small quantities. These conditions are, to put it in during a rain, immediately after a rain, or just before a rain. If these are not observed, it will burn all before it.

Then the trouble of pounding it to a powder and mixing it with mould or plaster, gives additional trouble and labor to the man who has no extra hands, and who will find no pleasure in an uncertain experiment, merely for the philosophy or science of the thing, which stands him in, eight dollars the acre. Then again if the land is rich and in good order, the application is superfluous, as it makes clover grow several feet in height, but with a stalk so stiff, cattle might as well chew the rails of the fence. Wheat too, it will send into the air, vigorously and loftily, but gives no proportionate amount of grain. On the whole, I came to the conclusion, that on good soils, in good condition, it would not pay; but on poor soils, or worn-out soils, if carefully managed, its value is inestimable. Delaware and Maryland are evidences of this truth. In the latter State, a farmer applied it on ten acres of corn, and harvested eleven hundred measured bushels as his crop. Also to gardeners it is of great value, but the working farmer of small capital, must look before he leaps.

Very respectfully yours, A. L. ELWYN.

MR. EDITOR:—Your repeated calls in the Farm Journal, for the results of experiments made in our

county with guano, has induced me to give the result of mine, which, though very limited, you may dispose of as you see proper.

In 1846, I bought a barrel (about 300 lbs.) of guano, part of which I mixed with an equal quantity of plaster, and sowed it on grass intended for hay.—Another part I sowed unmixed alongside the mixed. Some I sowed on wheat at the same time, and to test its effects, I varied the quantity, at the rate of from one to three bushels per acre. From all this I could see no beneficial results.

About the half of the barrel I kept for the corn, part of which I put on, mixed as above, and some pure, and when the corn was up, the result was the same as on grass and wheat.

But before I had planted the corn, a neighbor handed me a pamphlet on guano, its application, &c., and as I had no prejudice against book farming, I strictly followed its directions, which were, as near as I remember, as follows: "When your corn ground is marked out, spread about half a gill of guano at the mark for every hill, cover it half an inch with earth, drop the corn on this, and cover it in the usual way." A square of twenty hills each way, the average quality of the field, was planted in this manner, and the result here was visible as soon as the corn came up. It was of a darker green, and more luxuriant growth than any around it, and soon had the start and maintained it during its growth, being from six to twelve inches taller than the rest immediately surrounding it. But the season being very favorable and the soil (a clayey limestone a little mixed with sand) in a pretty good condition, the yield was not so great as it was during its growth. I was not, however, particular enough to weigh the corn of this, and an equal number of hills alongside, and compare them, to know what the exact difference in quantity was.

J. MILLER.

Oregon, Lancaster co., Aug. 11, 1851.

MR. EDITOR:—A writer in your paper speaks of the backwardness of Pennsylvania in agriculture.—This is a mistake, the truth is the other way, and I have no hesitation in asserting, that agriculture as an art, is no where in this country understood as well or practised as well as in Lancaster, Chester, Delaware, Montgomery and Bucks. In New York, or New England, or in some other States, there may be individuals who cultivate their lands as well or better than it is done in these counties, but no where on this continent is agriculture so well advanced as there. We shall see what will be done at Harrisburg—Cumberland, Franklin and Dauphin are fine counties, and if not too modest, may make Pennsylvanians proud of their State. But when the exhibition is held at Lancaster, Norristown, Newtown, or West Chester, I am satisfied that the triumph and exultation will be immense. Let Pennsylvania put herself a little more forward and bristle up a little, and you will see several other States droop their crests. E.

TRANSLATED FOR THE FARM JOURNAL.

Agricultural Chemistry.

LÖBE'S ENCYCLOPÆDIA OF AGRICULTURE, from which the following article is translated, is a German serial now in the course of publication at Leipzig. Twenty-six livraisons or parts have been issued, and the whole is to be comprised in forty, illustrated with wood cuts. This publication differs, in its plan and execution, from others of like name or similar character, mainly by the arrangement of the subjects treated of in comprehensive classes and the discussion of each fully and independently. Hence, the reader is not annoyed and perplexed by vexatious references from one article to numerous others, nor compelled to collect and in a great measure compile for himself the information he seeks. It possesses, besides, a decided advantage in being the first publication of its class issued since agriculture has properly become elevated to the rank of a science. Its editor (who is also the publisher of an agricultural paper, and of the Year Book of agricultural progress, discovery and statistics,) is aided by numerous competent assistants, among whom are practical farmers, scientific gentlemen, principals of farm schools, and professors in agricultural colleges. The article on agricultural chemistry prepared for this work, has been selected for translation, under the impression that the manner in which the subject is treated fits it peculiarly for the first volume of the *Farm Journal*—a periodical circulating extensively among practical cultivators of the soil, a portion of whom, probably, have not hitherto had their attention turned in this direction. To such, a general view of a subject, acknowledged by those conversant with it, to be of great importance to husbandmen, can scarcely fail to be interesting and instructive; and will serve to prepare them for the profitable perusal and study of more elaborate treatises.

W.

No. 1.

Agricultural chemistry is the application of the principles and processes of chemical science to the operations of rural economy. The numerous, important and various benefits which the natural sciences in general confer, directly and indirectly, on the cultivation of the soil—aside from the gratification and mental improvement which the study of them imparts—can scarcely be sufficiently appreciated. Relying on the ascertained and demonstrated principles and truths of these sciences, the agriculturist is enabled to investigate, solve and explain every natural phenomenon or occurrence falling within the province of his occupation or pursuits, and thereby not unfrequently to refute and explode antiquated or false views, erroneous practices and pernicious prejudices. From personal observation and reflection, he will be able, also, to deduce and develop valuable principles applicable in the routine of his avocation. On the

basis of independent logical induction, he may devise and apply new processes and improved methods of culture; proceed intelligently and with confidence in the composition and application of artificial stimulants and fertilizers; may qualify himself to estimate with precision the value of soils, manures and products; and, finally, be able to form a correct opinion of the worth or worthlessness of proposed innovations in practice, and of the truth or falsity of novel theories in science.

Among the natural sciences, chemistry, though held in low estimation by many practical farmers, has undoubtedly a most intimate connection with agriculture, and yields to it the most important aid. THAER, one of the most eminent and successful practical cultivators, and a highly distinguished agricultural writer, did not fail to pursue the study of this science with untiring assiduity; and the celebrated HUMPHREY DAVY, in the introduction to his course of lectures on agricultural chemistry, says:—

“Information collected after views of distinct inquiry, would necessarily be more accurate, and more capable of being connected with the general principles of science; and a few histories of the results of truly philosophical experiments in agricultural chemistry, would be of more value in enlightening and benefitting the farmer, than the greatest possible accumulation of imperfect trials, conducted merely in the empirical spirit. It is no unusual occurrence for persons who agree in favor of practice and experience, to condemn generally all attempts to improve agriculture by philosophical inquiries and chemical methods. That much vague speculation may be found in the works of those who have lightly taken up agricultural chemistry, it is impossible to deny. It is not uncommon to find a number of changes rung upon a string of technical terms, such as oxygen, hydrogen, carbon and azote, as if the science depended on words rather than on things. But this is in fact an argument for the necessity of the establishment of just principles of chemistry on the subject. Whoever reasons upon agriculture, is obliged to recur to this science. He feels that it is scarcely possible to advance a step without it; and if he is satisfied with insufficient views, it is not because he prefers them to accurate knowledge, but generally because they are more current. If a person journeying in the night wishes to avoid being led astray by the ignis fatuus, the most secure method is to carry a lamp in his own hand. It has been said, and undoubtedly with great truth, that a philosophical chemist would most probably make a very unprofitable business of farming; and this certainly would be the case, if he were a mere philosophical chemist; and unless he had served his apprenticeship to the practice of the art, as well as to the theory. But there is reason to believe that he would be a more successful agriculturist than a person equally uninitiated in farming, but ignorant of chemistry altogether; his science, as far as it went, would be successful to him. It undoubtedly happens in agricultural chemical experiments, conducted after the most refined theoretical views, that there are many instances of failure for one of success. This is inevitable from the capricious and uncertain nature of the causes that operate, and from the impossibility of calculating on all circumstances that may interfere. But this is far from proving the inutility of such trials; one happy result,

which can generally improve methods of cultivation, is worth the labor of a whole life; and an unsuccessful experiment well observed, must establish some truth or tend to remove some prejudice."

In point of fact, also, chemistry has already rendered no small service to agriculture. If we regard, in the first place, the science of vegetable production, it will be evident in advance that chemistry must have a direct bearing on this branch of agriculture, since the germination, growth, developement, and maturity of plants are results of chemical processes. It is very certain that by making the farmer acquainted with the various inorganic substances requisite for the due growth of plants, and teaching him to employ those substances for their nourishment, as also the best modes for preparing artificial manures, and the proper composition and mixture of substances suited for the food of plants, chemistry has already conferred benefits on agriculture, the importance of which has been practically demonstrated by operations founded on theory. On a closer examination moreover, we find that chemistry has taught that all nitrogenous combinations intended to be produced by the organism of plants—such as albumen, gluten, caseine, &c., substances most essential to and most efficient for the sustenance of animals—must obtain their nitrogen in the form of ammonia; because no organic substance can serve as food until it has by the putrefactive process assumed the form of inorganic elements (ammonia, carbonic acid, and water, the products of this process); and that, consequently, no organic combination is susceptible of being brought, by the organism of plants, into the form requisite to enable these to seize and appropriate the nitrogen it contains. Furthermore, since chemistry has demonstrated that it is pre-eminently the liquid animal manures which contain nitrogen in large quantity, farmers have been induced to collect and preserve them very carefully, subjecting them to fermentation and applying the resulting volatile carbonate of ammonia to their land, not in a form in which it would speedily escape into the air to be again precipitated by rain, for the benefit of distant soils, but in combination with such salts as chemistry has pointed out, as being best adapted to fix the ammonia in a soluble form and thus enable the plants to appropriate it gradually and without loss.

From the foregoing remarks it is manifest that chemistry is by no means devoid of practical value in the cultivation of plants; and that consequently this branch of agriculture may derive immediate and highly important advantages from the resources of this science. As regards the phenomena of vegetable growth, chemistry has certainly furnished the most satisfactory explications of observed appearances, of the nature of which agriculturists had previously very vague and obscure notions. And though all the explanations hitherto submitted, should not be confirmed by further research or future discovery, she will

ever retain the merit of having incited to renewed investigations, and of having largely contributed to elevate agriculture to the rank of a science. Though farmers may hitherto have derived no practical benefit from the remarkable elucidations furnished by chemistry of the nature of assimilation and growth; of the relation which humus bears to plants; of the composition of manures in view of their effects; of the nature and elements of rain water; of the effect of gypsum or leguminous plants; of the conditions requisite for the formation of albumen, gluten, &c.; and of numerous other subjects and observed phenomena, which is explained in so interesting a manner by chemistry; still the explanations and elucidation themselves, will be of the greater interest to every intelligent farmer, because they have rendered clear and plain to him many a process and phenomenon not previously understood. He will now, moreover, not unfrequently be able, by combination and induction, to derive from those explanations, the means of rendering his knowledge practically useful as occasions occur.

But, apart altogether from the practical value of chemistry, every thinking farmer will be anxious to give a scientific aspect to his pursuits, intimately connected as those are with living nature; for it is science alone which confers true enjoyment in the business of life, and elevates man above mere dead machinery.

With respect to the influence and effect of chemistry on the management of soils, it must be conceded that by her aid only did it become practicable to ascertain their constituents and composition, and to arrange them in systematic order. So also, with respect to the rearing of domestic animals, chemistry may claim the undoubted merit of having made the cattle-breeder acquainted with the substances which contain real nutriment, as well as with their nature and component elements, and their effects in the animal economy. Chemistry may also take credit for having scientifically demonstrated the truth of those observations as to the comparative value and the composition of various kinds of food, which had been gathered and treasured up from the experiments and experience of the breeder; and of having first explained, and arranged under simple laws, the remarkable and inseparable connection which exists between the vegetable and the animal kingdoms.

Though, despite of the obvious importance of chemistry, and of her undeniable influence on agricultural pursuits, the practical farmer has so long and so generally struggled, and is still struggling, against devoting to chemical science, the time, space, attention, and labor requisite for determining with greater precision the nature and extent of this importance, the fact itself, singular as it may appear, need not create surprise. New ideas and practices have rarely been introduced and obtained currency without

struggle and obstinate resistance—especially when the adoption of them involved material changes in existing practices and habits. Moreover, the course pursued by the advocates of science was not always the most judicious, or the best calculated to make proselytes. It was inconsiderate and rash, for instance, on the part of Theory, to set down her suppositions and conjectures as undoubted and undeniable truths, without having previously subjected them to the test of rigid experiment. It was wrong, in her, to deduce general conclusions from isolated facts; and it was unwise to spurn and contemn the experience of practical farmers, instead of using it, wherever it could be availed of, for the advancement of knowledge. Above all it was arrogant for Theory to assume a pompous bearing as a science, while yet unable to claim a minute acquaintance with existing and prevalent practice—nay, while haughtily and disdainfully professing the most entire independence thereof and separation therefrom. But, in general, the practical farmer committed a similar unfortunate mistake. Thus, it was presumptuous in him to condemn without trial, or after a few imperfect trials, the legitimate inferences and conclusions of science. It was unjust in him to require from a science yet in her infancy, the steady and stately steppings of mature age and experience; and when, instead of principles, he demanded specific facts and proved prescriptions—clear directions and plain precepts, instead of hints, suggestions and considerate advice, he asked for what he could not reasonably expect to receive. In short, it was irrational to exact, what it is not the proper province of science to furnish. But here, precisely, obstacles oppose themselves to progress of chemical research, which greatly enhance the difficulty of ascertaining the true condition of things, or of discovering and establishing truth by crucial experiments. The operator is not here occupied with processes purely chemical, but must first ascertain, by close and vigilant attention what variations or deviations are superinduced by the inherent vital forces of plants and animals. He has not here to deal exclusively with constant magnitudes and unchanging circumstances; but, whilst seeking to demonstrate the correctness of his views and conclusions, he is just as dependent on varieties of soil, diversities of climate, and vicissitudes of weather, as the practical farmer himself. And, finally, it is not always in his power to institute, as promptly and as frequently as he might desire, those crucial experiments which are so satisfactory in their results; but is oftentimes constrained to wait patiently months or years, for opportunities which enable him to arrive at reliable conclusions. Viewed in this aspect, it is manifestly unfair to judge of chemistry solely from her achievements in the comparatively brief period that has elapsed since she began to turn her attention seriously to the nature of soils and the processes of rural art. It would be more just and equitable to

defer pronouncing judgment in her case, till it be seen whether the numerous buds and blossoms, which—especially under the impulse imparted by Liebig and Boussingault—have sprung forth in the last few years, wither and fall, or flourish and mature.—Though many of these may drop abortive, others will doubtless, in due season, produce valuable fruit.

Chemistry will, however, reach the desired goal the more speedily and the more surely, the more she withdraws from the school and the lecture room, to mingle actively in the practical operations on the farm and in the field. Then also will the working farmer more readily and more cordially extend to her a welcoming hand, and peace and harmony follow transient dissension, distrust and estrangement. It is gratifying to perceive that the necessity and advantage of a thorough reconciliation and union are, of late, felt more and more by both parties; and that the one-sided position hitherto occupied by many practical men, as well as by theorists, is gradually being abandoned. Even now, chemistry is availed of by many farmers, though they are scarcely aware of the fact, or still reluctant to admit it. When the farmer proposes to lime his land, he takes counsel from chemistry. If he buy gypsum or ashes, analysis alone can assure him that the article he obtains is genuine and pure. If he purchase guano, chemistry must be invoked to determine whether it is free from adulteration and retains the due amount of fertilizing elements: and the same is true in scarcely less degree, when bone-dust is procured for the amelioration of the soil. If the farmer would manure his land with muck, he cannot tell until the substance has been analysed, whether it do not contain some deleterious ingredient. If he would dress a boggy meadow with earth, or mix this with litter for his cattle, chemistry again teaches him to select with certainty that which is best suited to his purpose.—If he design to subsoil his land, he learns from chemistry whether the operation would benefit or injure the particular kind of crop he intends to cultivate.—In short, it is chemistry always, in her proper sphere, which saves or succors the farmer from harm, and comes to his aid with safe and reliable counsels, whenever, in the course of practical culture, he finds himself in a dilemma or encounters a difficulty.

HOMEOPATHY.—Old Matthew Maule was executed for the crime of witchcraft. He was one of the martyrs to that terrible delusion which should teach us among its other morals that the influential classes, and those who take upon themselves to be teachers of the people, are fully liable to all the passionate error that ever characterised the maddest mob.—Clergymen, judges, statesmen, the wisest, calmest, holiest persons of their day, stood in this inner circle round about the gallows, loudest to applaud the work of blood, latest to confess themselves *miserably* deceived.—*Hawthorne.*

The Potato Rot.

MR. EDITOR:—I have read various Essays on the subject of the potato rot, and as I dissent entirely from the conclusions of these writers, I am induced to put forth my own opinion through the medium of your valuable paper.

My views are entitled to no other consideration, than as embodying the result of my own observation and experience, and while these have satisfied me, I do not pretend that they ought to satisfy others.—Some suppose that this disease originates from the natural decay of the plant, and that it is necessary to renovate it, by planting the ball, and by this means rear a new seed. Others believe that an insect produces the decay. I repudiate both of these notions, and assert from my own observation that these causes do not generate the disease. The first potato rot, as a general epidemic in this section of the country occurred in 1842. I had a field which looked very promising for a large crop. In August, after the crop was nearly matured we had a heavy rain, succeeded by a hot sun. It was ascertained that the potatoes immediately commenced rotting, and when they were dug, a large portion were found unfit for use. The ground on which this crop grew, was a clay soil, which retained the water, and prevented its rapid escape. Under similar circumstances I noticed for several successive years, a like result; but attributing it to the popular opinion that the plant had degenerated, or that an insect had caused the decay, and adopting the belief that lime would obviate the difficulty, I had a piece of ground prepared last year according to the most approved method of preventing the rot. The land was deeply drilled, and heavily manured. In the drills lime was added, and on this the potato was planted. The growth of the vine was vigorous, and gave indications of a large crop, until the heavy rain the first of September. The ground was level, and the water remained upon the surface until it either evaporated or settled below the surface. This rain was followed by a hot sun, and when my potatoes were dug it was found that at least one-half were rotted. Some were slightly touched, but the process of decay continued, and out of a large crop I had difficulty in selecting enough for my family use. Having adopted every precaution suggested by the different writers upon this subject, I have been forced to fall back upon my own opinion, and to maintain that the *rot* is produced by the peculiar character of the season, and from no other cause. A heavy rain in August, succeeded by intense heat, where the ground is favorable, will inevitably produce the potato rot, and the reason is obvious. The ground is saturated with water—an August sun pours its heat upon it, and the steam process in the ground affects the surface of the potato, and causes its rapid decay. When this process of decomposition once commences, its progress continues, and communicates the disease to others.

I have observed that the first affected are near the surface, and I have also noticed that some are struck hardly skin deep. By exposing such to the atmosphere the progress of decay may be arrested. Upon sandy soil, such as our river bottoms the rot is unknown, and the reason is, the water settles at once below the potato, and consequently the action of the sun does not affect it.

The only argument against this theory of mine is that the rot has not universally prevailed until within the last few years, and it may be urged that the same cause would have produced the same effect. My only reply is, that the potato rot is not of recent origin.—It has always existed under similar circumstances, and though partial in its operations, like causes have produced like effects. Then again our seasons for a few years past have been favorable to the development of the disease, which has caused it to become more universal.

I have now to suggest the remedy. By planting the potato near the surface, upon ground where the water can easily escape, the rot will be avoided. I would recommend the process of ridging the land by turning two furrows together and planting upon the top of the ridge. The water will then settle away and prevent the chemical action which produces the rot. By exercising care in planting and in the selection of the ground, I am satisfied this scourge which has so extensively prevailed can be avoided.

While talking upon the subject of potatoes, I am induced to advert to an experiment which I tried last fall. I planted a plot about the middle of November, by making deep drills and depositing about four inches of horse manure, upon which the potato was planted and covered sufficiently deep to escape the frost. The result was that I have had a full supply of potatoes a month earlier than I ever had them before. This may not be new to others, but I took the hint from observing that potatoes left in the ground after digging sprang up much earlier than those planted in the spring. I shall try the experiment on a larger scale this fall, and I have no doubt of its success.

L. KIDDER.

Wilkesbarre, Pa.

THREE IMPORTANT FACTS.—Never be influenced by external appearance in forming your judgment of a person's worth. This is an important rule, for many a noble spirit is covered by habiliments of the worst kind. Dean Swift said that nature has given every man a capacity of being agreeable, though not of shining in company; and "there are a hundred men sufficiently qualified for both, who, by a very few faults, that they may correct in half an hour, are not so much as tolerable." The world would be more happy if persons gave up more time to an intercourse of friendship. But money engrosses all our deference; and we scarce enjoy a social hour, because we think it unjustly stolen from the main business of life.—*Selected*

Animal Heat, &c.

MR. EDITOR:—One of the most interesting developments made through recent scientific investigation is the source of animal heat, hitherto regarded as one of the most inexplicable mysteries of the animal economy. How such a discovery can be brought to bear upon practical husbandry may be difficult to comprehend by some persons, although it can be substantiated by the money test, one which few will be able to reject as insufficient.

Dr. Playfair, who has recently examined this subject and thrown much light upon it, observes, that the average temperature of the bodies of our cattle is about 100° of Fahrenheit, which is some two or three degrees above that of our own bodies, a temperature much higher than the mean of our seasons, especially that of winter. But both summer and winter the heat of the bodies of most animals with red blood remains the same. It is evident that more heat must be taken off during the winter than in summer, and hence, as the increased quantity demanded must come from the food, more of this or a change in its quality, will be required to meet the exigencies of the season; just as more fuel must be put into the stove in the coldest weather. It is a well known fact, that the proportion of food consumed is very much greater among the inhabitants of the polar circle than in the tropical region.

Dr. Playfair gives an explanation of the phenomena connected with the origin of animal heat which cannot fail to interest every one who has the least curiosity to look into causes and effects. "The fuel," he says, "consists of those ingredients of food from which nitrogen is absent; they all contain carbon and the elements of water. We know that oxygen is continually inhaled in the air we breathe, and that it is never again expired—as such. Expired air consists of carbonic acid, a gas composed of carbon and oxygen. In the body, therefore, the oxygen has united with carbon; or *it has produced the very gas which is obtained by burning a piece of charcoal in the open air.* Now the heat generated by the combination of the carbon in the body must be exactly equivalent to that produced by burning the same amount in the atmosphere."

Experiments have taught us, that the average quantity of carbon in the food of an adult man amounts to fourteen ounces daily. By the combustion of this quantity 197,477 degrees of heat are produced, and this is amply sufficient to account for the heat of the human body.

The experiments of Boussingault show that a cow breathes out about seventy ounces of carbon daily, and from this we calculate that 987,385 degrees of heat must be produced in the body of a cow in the space of twenty-four hours. These calculations will at once prove that there is little difficulty in accounting for the heat of the animal body. A benefi-

cent Providence has arranged the products of different countries so as to meet the demands of their various climates. The fruits, and vegetable products upon which the inhabitants of warm countries live to feed contain only twelve per cent. of carbon, while the train oil enjoyed by the inhabitants of arctic regions contains above seventy per cent. of the same element of animal heat. The animal body is therefore aptly compared to a furnace which requires to be supplied with more or less fuel according to the temperature of the external air.

Now if we wish to turn these interesting facts to practical account in the feeding of cattle, the first point to be accomplished is to place these under circumstances favorable to the healthy play of their vital functions, and during winter this demands that the heat of their bodies should be kept up to a point of comfort. Where the bodies are not sufficiently protected from cold more food (fuel) must be furnished to the stock. Thus during winter, warmth is an equivalent for food, and, to a certain extent, food an equivalent for shelter. But in hot weather it is, evidently a great object to provide cattle with shade or shelter from the heat of the sun as they will otherwise have so little demand for animal heat as to induce them to take very little food and thus the supply of fuel being diminished the elements which contribute fat and muscle must both be deficient and the weight fall off. These interesting deductions have been practised upon, with results which appear confirmatory. The following experiment was tried by the Earl of Ducie at Whitefield farm.

One hundred sheep were folded by tens in pens, each of which was 22 feet in length by 10 feet in breadth, and possessed a covered shed attached to it of 12 feet in length by 10 in breadth. They were kept in these from the 10th of October to the 10th of March. Each sheep consumed on an average twenty pounds of Swedish turnips daily. Another hundred were folded in pens of a similar size, but without sheds attached. They were kept during the same time, and their daily consumption of turnips amounted to twenty-five pounds each. Here the circumstances were precisely similar with respect to exercise, the only difference being that the first hundred sheep had sheds into which they might retire, and thus be partially protected from the cold.

This partial protection was therefore equivalent to a certain amount of food, and consequently we find that the sheep enjoying this protection consumed one-fifth less food than those sheep which were left entirely exposed to the cold. In the last case the consumption of the additional food arose wholly from the necessity of adding more fuel (food) to the furnace of the body, in order to keep up its natural degree of warmth. This was proved from the circumstance that those which enjoyed the protection had increased three pounds each, more than those left un-

protected, although the latter had consumed one-fifth more food.

The results of similar experiments made by various farmers have led to a similar conclusion, namely, that warmth is, to a considerable extent a substitute for food. The reports of some other experiments seem somewhat discordant, but there are good reasons for believing that in making these, the animals were exposed to injurious influences which interfered with the results that might have been obtained under more favorable conditions.

The following practical observation of Dr. Playfair cannot receive too much attention from our farmers. "Warmth" he says, "is not only essential to their health and fattening progress, but this must be a dry and a wholesome warmth. To confine sheep, as is sometimes done, over putrefying masses of fold, shed, or farm-yard dung, in an atmosphere saturated with the fumes of ammonia and the gases of putrefaction, is to substitute one drawback upon the health and comfort of the animal for another, which produces a greater evil than cold. The sheep, in a state of nature, carefully avoids all these things; it leaves to the ox the deep rank growing grasses of the damp lowland pastures. It carefully seeks its food and its habitation on the highest elevations, amid dry rocks and heath-producing soils, far away from all great masses of decomposing organic matter. The domestic sheep of our inclosed lands, by always occupying the most elevated portions of the field, clearly indicates that its natural instinct in this respect is still unchanged by all the efforts of the breeder. Follow, then, the sheep from his upland pastures, in the clear, dry, warm climate of Asia, and view him placed in our cold temperature, in a warm shed it is true, but with the floor of that shed covered to the depth of many inches with a mass of putrefying dung, and then let us ask ourselves, 'is this the way fairly to test the advantages of shelter and of warmth to the domestic sheep? Is this the way to fairly try the economy of raising the temperature of the atmosphere in which it is placed?'"

The noxious influences to which sheltered stock are so often subjected and the loss sustained therefrom, have been already referred to in an article furnished by us in the first number of the Farm Journal," on "The importance of Ventilation, Cleanliness and Draining, for the preservation of the Health of Domestic Animals." Mr. George Dobits, the author of a most valuable prize "essay on fattening cattle," published in the Royal Agricultural Society of England, remarks, that cleanliness, warmth, and quiet are the great points to be insisted upon, coupled of course with good feeding. He makes no mention of free ventilation or the necessity for an ample supply of fresh air, which we regard as an important omission.

As immediately connected with this subject, those sufficiently interested would do well to consult the

tables very recently furnished, showing the proportions of the elements in different kinds of food which go to the formation of flesh, and the substance of animal heat. Those furnished by vegetables destined to the formation of flesh and perfectly identical with similar elements found in the completion of animal structures, and known by the names of *gluten* or glue, *albumen*, of which a pure example is furnished by the white of an egg, *fibrin*, or flesh, and *casein*, curd or cheesy matter. The elementary portions of vegetables which are suited for the supply of animal heat are of a very different kind from those just enumerated as entering into the composition of flesh, and consist of *starch*, *gum*, *sugar*, &c. Knowing these facts it becomes a money question as to the value of particular kinds of food for the support of animals, whether the profit from these is to be derived from the accumulation of fat and flesh, or from the other development of muscle for accomplishing more work. Along with much interesting information relating to this subject, several tables are furnished in the *Farmer's and Planter's Encyclopædia*, (Articles Ventilation, &c.) showing the quantities of turnips, potatoes, meat, bread, oatmeal, beans, and various other kinds of food necessary to produce one pound of flesh, and the money-cost of its production, as well as the value of various kinds of food considered as fuel to sustain animal heat, to furnish flesh and fat.

See Article Ventilation.

E.

Philadelphia, August, 1851.

Agricultural Societies.

Mr. EDITOR:—Since the organization of the State Society last winter and the liberal action of the Legislature, several county agricultural societies have been formed in the western part of the State. Bradford and Luzerne are among the number. Susquehanna and Wayne had previously organized their societies and been a few years in operation. Wyoming, Pike and Monroe will not be long in following the example.

The importance of local societies in connection with the State Society cannot be over-estimated. In addition to the general impulse given to the cause of agriculture they are the means of elevating the character of the farmers in their own estimation. Among many of the sons of farmers an erroneous opinion has prevailed that their vocation was not as honorable as that of the physician, the lawyer, and the merchant. In consequence of the prevalence of this pernicious error, many young men have pressed into the professions and into mercantile pursuits, who would have been much more useful and prosperous in the pursuit of agricultural science. One of the blessed effects of these organizations is to correct this error by giving the young farmer a just estimate of the honorable character of his profession.

They have also furnished a stimulus to higher effort. This is an exciting influence in the competition

introduced by these institutions, productive of most salutary effects upon the farming interests.

The science of agriculture has been too much neglected in Pennsylvania. While every other branch of national industry has been excited by progressive discovery and improvement many farmers have been content to trudge on in the old beaten path unmindful of the improvements made and making in their own department. They have seemed to think and act upon the supposition that there was to be no alleviation of the primeval curse and that "the sweat of the brow" alone was to produce the bread which they eat. But a brighter day is dawning and a spirit of inquiry is afloat for the best means of removing the severity of toil and labor to which farmers have, unfortunately, deemed themselves and their posterity doomed.

The local societies are doing much to aid in this good work and not only alleviating toil by the introduction of improved modes of working the land, but furnishing to the *minds* of the farmer, by means of books and papers suited to his tastes and adapted to his profit and pleasure, most suitable themes for reflection.

In connection with these organizations I hope for much good from the introduction into every farmer's family in the country of your Farm Journal. I have derived great profit from its perusal and should not consider myself as entitled to rank among the *intelligent* farmers of the country, if I did not regularly read its valuable and interesting articles.

I hope to send you a larger subscription list shortly.

Yours,

W. JESSUP.

Montrose, August, 1851.

Remarks on the improvement of Sheep.

TO THE EDITOR OF THE FARM JOURNAL.—Since the days of Bakewell, who was the first great modeller and improver of the shape and form of animals, much has been done by other eminent breeders to improve the character and constitution of cattle, sheep and swine, and to perpetuate the good work.

The long woolled sheep of certain districts in England, have obtained great weight of carcass and of fleece; weighing from 40 to 65 lbs. per quarter, and producing from 10 to 18 lbs. of wool each. See Youatt on Sheep, p. 332.

The South Downs have also been bred to great weight of carcass and wool, the latter of medium quality and well suited for general purposes. They are hardy and thrifty animals. A cross with the bucks of either of the above breeds on good common or native ewes, produces valuable stock, worth at least one-third to one-half more than the native kind, either for mutton or wool. Farmers in the interior would find it greatly to their advantage to use such bucks.

They may be raised with great profit also on rich and dry-lands within a reasonable distance of large

cities, on account of the great value of their mutton and wool, and the constant demand therefor.

Many persons over feed their high bred sheep, causing them to become too fat, which I consider a useless waste of food, as such meat can only be eaten by few persons. The South Downs are thought to produce the finest mutton that we have in the Philadelphia market, having more flesh in proportion to the fat, and that better mixed than any of the large breeds of sheep, and had they the mountain range of pastures, their flesh would perhaps be as delicate and high flavored as that of any of the small breeds.

I am glad to see that many farmers are turning their attention to the improvement of their flocks, and were they not constantly subjected to the risk and danger of their sheep being destroyed by worthless and useless dogs many more flocks would be kept. This evil should be remedied. The most valuable animal in the world should not be destroyed by the most worthless.

Some very large and heavy sheep were exhibited and slaughtered in this city during the last winter and spring, amongst which were three wethers fed by Mr. Benjamin Hood, of Chester county, one of which weighed when dressed 234 lbs., the other two 202 lbs. and 192 lbs. The largest sheep, a four years old, was of the Cotswold and Leicester blood, bred by Mr. Paschall Morris, of Chester county, the other two were Cotswold and Leicester, with one-fourth south down, bred by Mr. John Worth, Jr., also of Chester county, from a pure bred Cotswold buck that I obtained from J. M. McIntyre, Esq., of N. York, in 1845, and sold to him in 1846, with some ewes of the same breed. The wether bred by Mr. Morris was also sired by Mr. Worth's Cotswold buck. The huck and one of the ewes had taken the highest prizes offered for long woolled sheep at the State Fair held at Albany and also at the American Institute, New York. Mr. Worth was the only breeder of fine sheep in this part of the country that could be found willing to pay a liberal price for those fine animals at that time.

As Mr. Hood purchased those wethers when they were quite young, he certainly deserves much credit for his perseverance and good management in feeding them and causing them to arrive at such great weight—one of them being the heaviest sheep ever slaughtered in this country.

A buck purchased by me of Mr. Clayton B. Reibold, of Delaware, two years old the last spring, bred from his imported Oxfordshire stock, produced at shearing, in May last, 16½ lbs. of wool. And three yearlings bred from one of his bucks averaged about 11 lbs. each. The above is evidence of what good stock will do with good keeping.

AARON CLEMENT.

Philadelphia, August 4, 1851.

THAT writer does the most who gives his reader the most knowledge, and takes from him the least time.

Bee Moth.

MR. EDITOR:—In a late number of the Eichstädt “*Bienenzitung*,” Dr. Alefeld states that, in the summer of 1850, he placed a number of grubs or larvæ of the bee-moth (*Tinca cereana*) in a glass tumbler, and supplied them with empty honey-comb, to have an opportunity to study their habits and ascertain their periods of development. They devoured the food greedily, and all of them spun cocoons, save one—the color of which changed to a yellowish brown, and the insect perished soon after. On opening it, for examination, he was surprised to find its body filled with the larvæ, and a few pupæ, of some species of ichneumon fly. He was anxious to preserve these, in order to ascertain the particular species to which they belonged; but, being called from home, he found the whole dried up on his return, though he had carefully closed up the cut in the body of the worm and avoided doing it further injury. This was to him a serious disappointment; for having thus accidentally discovered, as he believed, that a natural enemy and destroyer of the bee-moth exists, he was very desirous of procuring the insect in its perfect state, that its proper order and class might be determined. Conceiving that this parasitic insect, if known, might be made available by apiarians for the purpose of checking the ravages of the bee-moth, he solicits the attention of entomologists to the subject—of those especially, who are apiarians also.

If, as “the books” say, and as is generally believed, the bee-moth in this country is of European origin, it is possible that, though in its native clime it has a natural enemy, designed to keep it in check, that enemy may not have accompanied it across the ocean. The hive or comb, which introduced the *Tinea cereana*, may, when it left Europe, have contained only the undeveloped eggs of the insect—thus presenting no suitable *nidus* for the eggs of the parasite, and precluding its simultaneous introduction here. This may also be one (or the chief) reason why the bee-moth is so much more destructive in this country, than it appears to be on the continent of Europe.—Apiarians there generally succeed in preserving their stocks, by mere ordinary care; whereas, in this country, this can be accomplished only by unremitting attention—particularly where the common straw hive is used. In the five volumes of the “*Bienenzitung*” now published, containing communications from practical bee-culturists in all parts of Germany, Belgium, Switzerland, Poland, Hungary, &c. there is not a single article that represents the ravages of the bee-moth as constituting any special obstacle, or presenting any peculiar difficulty, in bee-culture. In formal treatises also, on the management of the honey bee, the matter is indeed introduced; but is passed over as of comparatively little importance.—The moth is certainly regarded there as pernicious and occasionally destructive; but where stocks are

kept populous, and are otherwise in a healthy normal state, there seems to be no difficulty, from this source, in prosecuting bee-culture with success and profit.

As the moth is on the wing only after dusk or night-fall, and lies concealed in crevices and nooks during the day, it is comparatively little exposed to the dangers which other noxious insects have to encounter. And it has therefore a better chance to multiply and become destructive here, if nature have not provided some special means of limiting its increase and thus restricting its depredations. The fact stated by Dr. Alefeld renders it probable that such provision was made and exists, in the native region of the moth; though it is possible that we have not the benefit of its services in this western hemisphere. The matter may therefore be worthy of investigation, and perchance some of our entomologists, if their attention be turned thereto, may be able to ascertain, whether the supposed ichneumon fly is to be found here; or whether the *antidote* has failed to accompany the *bane* in its transition to this country.

It has been remarked that very few moths have made their appearance this summer. Early in April, I found one, but have not seen any since; though I have frequently observed the workers dragging out struggling larvæ from an old straw hive. This they continued to do till after the middle of June. Judging from the strength and present industry of this stock, I doubt whether a single larvæ eluded their vigilance, or was allowed to mature.

The scarcity of swarms, this season, is also a subject of remark and general complaint among bee-keepers—very few stocks having sent forth colonies. This is usually the case, when bees, whose hives are well filled with comb, pass the winter in good condition, and a spring succeeds remarkable, like the past one, for abundance of forage, and weather favorable for its collection. The cells are then stored with honey, as rapidly as the early brood emerge; and unless an eke be given to the hive, in which new comb may be built, the queen will find but few empty cells wherein to deposit eggs. Under such circumstances the weight of the hive increases rapidly, whilst, from deficiency of brood, the increase of population is little more than sufficient to supply the daily losses from birds, insects, and accidental causes. Swarming is then, of course, out of question—however large the mass of bees hanging out, from want of room, rather than from excessive heat, within.—Occasionally, this state of affairs results in the production of swarms in July, when forage has become less abundant and the consumption of honey affords room for brooding. Such swarms are worth little; and the proper course, if drones still abound, is, to search for and destroy their queen immediately, and let the bees return to the parent hive—which then supplying itself with a young queen, will be of in-

creased value as a stock hive, from the large stores of pollen or bee-bread, which will be collected in the brief interval during which it will contain no brood.

It has of late been alleged, as a fact confirmed by observation in Europe, that the bee-moth will not primarily attack honey comb which does not contain pollen. This, if true, is of importance; and therefore merits investigation. It is also stated that planting hemp, in the vicinity of the apiary, will have the effect of keeping off the moth, as the insect appears to have an aversion to the odor of that plant—which is said to be of like efficacy in expelling the *mille* from a cabbage garden. Experiments should be made to ascertain whether these statements are correct.

W.

Agricultural Nuisances, No. 1.

CANADA THISTLE—CURSED THISTLE, OR CRISP THISTLE.

French—Chardon aux anes. German—Die ackerkratzdistel, or Die ackerdistel.

Cirsium arvense, *Scopoli*. *Carduus arvensis*, *Smith*. *Carduus serratuloides*, *Necker*. *Carduus haemorrhooidalis*,—*Serratula arvensis*, *Linnaeus*. *Cnicus arvensis*, *Pursh*, (this name is adopted by most old American botanists.) *Breca arvensis*, *Lessing*.

It is evidently not a *Cnicus*, for the *marginal flowers are not neutral*, the *puppus is plumose*, and the *seeds are not ribbed*! The name of *Scopoli*, therefore, takes precedence, because this plant is a true *Cirsium*; a genus established by *Tournefort* about 1681, and which now contains one hundred and sixty species. *Torry* and *Gray* describe nineteen species as growing in North America; two of these are exotics, and four of them are but little known, having been discovered by *Nuttall* and *Drummond* in the region of the rocky mountains. Seven of them have been found in Pennsylvania.

Cirsium comes from the Greek word *kirsoς*, signifying a swelled or enlarged vein, for which the thistle was a reputed remedy, and *arvense* signifies growing in a field. It belongs to the 19th class (*Syngenesia*), and the 1st order (*Equalis*), of the Artificial System of *Linnaeus*. To order *Compositae*, tribe *Cardui*, in the Natural System of *Adamson*,—but tribe *Cynaria*, in the Flora of North America. This species is a native of Europe and Asia, and was introduced into the New England State in “timothy seed,” and is the most detestable weed that ever invaded the farm.

The stem grows to from one to three feet high, erect, and marked with longitudinal lines, irregularly branched from nearly to the base; branches slender and covered with a sort of loose wool. The leaves are sometimes a little woolly on the lower side, they are scalloped and toothed, each tooth terminated with a spine, they clasp the stem and are slightly continued down it. The branches are terminated with egg-shaped heads from one-fourth to two-thirds of an inch in diameter, with rose purple flowers, the filaments of which are smooth. The leaves around the head (*involucre*) are oblong ovoid, scarcely termi-

nated with a prickle, smooth on both sides, with a few hairs on the edges. The seeds are slightly four cornered, with the hairs on the crown branched, or plumose, so that when they are matured, they float through the air and disseminate themselves far and wide.

The roots are extremely creeping, and produce adventitious buds which throw up stems in all directions. To convey an idea of their tenacity of life, I will copy a short article published by the Bath Agricultural Society:

“ April 1st, 1778. I planted in a garden a piece of the root of this thistle, about the size of a goose quill and two inches long, with a small head of leaves cut off from the main root, just as it was springing out of the ground. By the 2d of November following, this small root had thrown out shoots, several of which had extended themselves to the distance of eight feet—some had even thrown up leaves five feet from the original root. Most of the shoots, which had thus far extended themselves, were about six inches under ground, others had penetrated to the depth of two feet and a half; the whole together, when dug up and washed from the earth, weighed four pounds. In the spring of 1779, contrary to my expectations, this thistle made its appearance on and about the spot where the small piece was originally planted. There were between fifty and sixty young heads, which must have sprung from the roots which eluded the gardener’s search, though he was particularly careful in extracting them.”

All the other thistles are only biennial, that is, the first year they produce only leaves, the second year perfect their flowers and fruit, and then die. They are, therefore, easily eradicated, by merely preventing them from going to seed. But the Canada thistle not only propagates itself by its seeds but by its roots. Although it is generally regarded as perennial, the slight acquaintance I have had with it, induced me to regard it as a biennial. The stem and leaves die down to the ground the second season, but it seems to provide itself with new roots which produce new plants, these in turn live only two years. The only means to destroy it, is to prevent it from producing leaves, for as soon as the leaves expand, the roots must strike off and produce new plants.

Many other plants have been mistaken for the Canada thistle. I saw an account somewhere of an ordinance being passed by some city against the Canada thistle, which proved to be the *Xanthium spinosum*, “thorny clot-bur.” Some species of the *Centanrea*, *Onopordon*, *Carlina* and the different thistles have been mistaken for it, particularly the *Carduus horridulum*, or “yellow thistle,” but the flowers of this are yellow, and often near two inches in diameter. This thistle may be distinguished by its small heads, crimped leaves, smooth stem, and the smooth filaments of the flower.

It is growing in this county at “Centre line,” and the indifference with which it is regarded by the farmers in that vicinity, has already permitted it to obtain a pre-emption right that will be extremely diffi-

cult to extinguish. If it is prevented from extending itself in the adjoining valleys it must receive decided attention, and be kept from producing seed. If the whole of the thistles were deeply covered with lime and suffered to remain for several years it would effect its destruction.

J. M. McMENN.

Unionville, Centre co., Pa., Aug. 9, 1851.

The proper quantity of Lime on an acre.

MR. EDITOR:—An idea has prevailed, very generally, that lime, applied as a fertilizer, should be spread upon a limestone soil in double the quantity that would be sufficient and proper for a sandy or gravelly soil. Fifty bushels to the acre have been thought to be the right quantity for the former, and twenty-five or thirty for the latter.

In the northern and eastern parts of Lancaster county, there are sandstone ridges, where lime operates with magical effect. Twenty or thirty bushels produce an obvious improvement in whatever crops it is applied to; but experiments have shown, that the benefit increases in proportion to the quantity, to the extent of more than a hundred bushels to the acre. A farmer, in order to test the effect, measured off accurately a square perch, in his field, and spread over this perch exactly one bushel of lime, which was at the rate of one hundred and sixty bushels to the acre. The crop grown upon it, compared with the rest of the field, satisfied him that no portion of the lime was useless. The gentleman from whom this information is derived, remarked that, from what he had observed of the effects of lime on such a soil, he believed two hundred bushels of it upon an acre would be more efficacious than any smaller quantity; in other words, that the grass or grain would be in proportion to the amount of lime applied, at least to that extent.

II.

Lancaster, August, 1851.

Murrain.

MR. EDITOR.—Having had many a loss from that most fatal disease, called murrain; it was with no small gratification that I observed in the August number of your valuable paper, that by the skill of a member of the family of J. B. S., of Fruit Hill, a cure has been discovered.

The interests of the farming community will be much enhanced by this *sine qua non* to the safety of herds—particularly should it prove, as J. S. B. believes, an infallible remedy. Believing it well worth the attention of agricultural societies, I would suggest that awards suitable to the importance of the occasion should be given for discoveries of value to the farmer and horticulturist, by our State Society; and inasmuch as the benefits are likely to be general, would not this be the proper awarder?

Mr. Harlacher should not be allowed to pay, from his own pocket, for a remedy against the ravages of the cucumber bug; though I am not so sure fifty

dollars should be paid to save pickles merely. This would make the price of recipes of such a value, that the product of the skill of a worthy member of the community would be of too high a price to be proportionate, and too onerous to the donors.

But I think I could go to work upon a case of disease, (should I be so unfortunate as to have to do so,) with more confidence in the means were these more satisfactorily proven to be infallible.

The belief of J. S. B. is either fixed upon a single trial, as previous to this case, he says, "every remedy of which I had ever heard, was tried with them, but without success"—or he must have made his conclusions of infallibility of remedy from the certainty of effects following causes, and a knowledge of the nature of the affection, as well as the *modus operandi* of the medicines.

That this is the cause of his confidence we are led to believe, partly from the prohibition of water, showing investigation of the complaint by unerring science.

We have tried poke-root alone, and have been assured that it has cured, by those whose veracity we would not question—but the results are only an occasional cure at best—and we would suggest that our friend J. S. B. be not too sanguine, unless he has more ground of faith than an isolated cure ought to beget—seeing no one case is sufficient to establish a rule.

We hope, however, the discovery, is a good one; and we think the name of such public benefactor should be known, so as to be remembered, at least, with gratitude.

We wish to hear again from J. S. B. desiring a more full exposition of the nature of this malady called murrain; as much ignorance prevails as to its nature or its cause.

"An ounce of preventive is better than a pound of cure," and if we could have some insight into the complaint, we might have a preventive that would be worth more than a cure.

C. H. L.

Rose Dale, Berks co., Aug. 12, 1851.

P. S. Since, upon conversing with some brother farmers, one suggests that this is the identical cure used very effectually in the neighborhood where he formerly resided. If this be so, it may not still detract from the merit of the worthy member, seeing the remedy has never been heard of there; and hence the credit due to investigation and discovery, still belongs to our correspondent's family—and infallibility the more effectually established.

C. L. II.

SORREL is a perennial, and prefers a poor soil.—Plowing while in blossom will destroy it, and liming and deep plowing will prevent its growth. The sour taste in the weed is caused by the binoxalate of potash.

It requires more courage to think differently from the multitude than it does to fight them. The first hero, therefore, was not he who made the first conquest, but he who uttered the first doubt.

Progress in Farming.

It is not known to many who have been accustomed to hear of the fertility of Lancaster county, that there is a considerable portion of her broad acres, which is a thin, poor soil. Standing upon one of the eminences, in or near the city, you will behold, at the distance of ten or fifteen miles, a girdle of mountainous elevations, which seem to encompass you whichever way you turn. These are branches of the South Mountain, and embrace, within our borders, the Conewago, Chesnut, Turkey, Martie, Octorara, and Mine Hills, the Welsh Mountains and Mount Hope; and descend with various grades to the limestone valleys and plains, whose extent and fertility have contributed so much to the fame of Lancaster county; for being originally productive, they soon enriched their first proprietors. But the hills and mountains, with a thin, gravelly surface, and a grudging soil, poorly rewarded the labor bestowed on them; and it cost the hardy inhabitants a severe struggle, to enable them, with the strictest economy, to rear their families and hold their own. Many of them, hopeless of bettering their situations in the neighborhoods in which they were born, emigrated to the far west. Few are aware of the great drain of population, which Lancaster county has suffered from this cause. The last fifteen or twenty years have, however, produced a gratifying change. It commenced with plaster of Paris, which was found to have a marvellous effect upon the grass and grain, clothing the almost barren fields on these hill sides with luxuriant vegetation.

Farmers began to discover, that it was better to confine their labors to so much land as they could prepare for their crops by a proper application of manure, than by a vain effort to increase their profits by extending the area of their culture to the utmost. After using plaster for a few years, they perceived that its efficacy was diminished, and they began to turn their attention to lime; which was, every way, fortunate, as this supplied more abundantly what the soil required to fertilize it, and at a cheaper rate. Besides, the fertility occasioned by lime is permanent and the material is obtainable in our county, and in the vicinity of the lands where it was needed. It is amazing to see the improvement of this hilly region. Instead of the sterile fields marked with a sparse growth of stunted grass and brambles, and the miserable wooden tenements and rickety fences, which were formerly the disagreeable features presented to view, you now behold comfortable brick or stone mansions and good bank barns, in due season well filled, the fields neatly enclosed and teeming with the rich products of agriculture, and orchards laden with fruit. Taking whole neighborhoods together, we are informed that the yield of grain has been increased, by improved cultivation, five fold; and where no grass was formerly grown, they have now abundant

crops. The selling value of real estate, has advanced in a similar ratio; and this is a natural result. This hill country abounding in springs of the purest water, and fanned by healthy breezes, is one of the most salubrious in the world; and since it is ascertained, that they can by proper cultivation raise as good crops here, as in the neighboring valleys, the motive and the desire to emigrate have ceased. Tracts are divided to accommodate the multiplying population, a process, by the by, which is much extended—so that the farms of Lancaster county will hardly average at the present time, one hundred acres each.

Among the mineral resources of our county, there is one whose value, I think, is not fully appreciated—I mean the *limestone*. It is a most important fertilizer. It has already trebled the worth of many a farm, and will ultimately double the productive capacity of every cultivable acre within our borders.

A. L. HAYES.

August 16, 1851.

MR. EDITOR:—Is not your Fruit Hill correspondent too sanguine in pronouncing a remedy infallible from its effects in a single case? Several plants in different sections of the country are called pokeweed. Does he mean the *Phytolacca decandra* of botanists?* In the work referred to this is said to be actively emetic. What is intended to be its mode of operating in J. S. B.'s case? What are the cause and nature of the disease? Without this knowledge our prescriptions must be entirely empirical. Is it not analogous to dysentery in the human system? If so, then all the 'pathy's and 'ism's from *allo* to *chronothermal* have failed to find a remedy *infallible* however "strictly adhered to."

It is not intended to find fault with your correspondent, but with yourself. Would it not be well, for the acknowledged scientific editor, to add a note of comment upon articles which might mislead; or are the readers of the Farm Journal presumed to be so scientific, as to receive without allowance such extracts as the following in your first No.? "One Shanghai cock and two hens will produce more eggs in three months time than five times that number of ordinary hens will do in one year." That is, if each hen lays an egg every day—perhaps the cock lays two (too)—it would amount to one hundred and eighty. Now to make this number, the ten would require to produce eighteen each in the year. If the Rev. S. A. B. will designate the variety so extraordinary he will benefit us farmers by enabling us to avoid them.

J. K. E.

Chester county, August 15, 1851.

[As the particular kind of pokeweed used by J. S. B. was not communicated to us, we, of course, cannot answer J. K. E.'s inquiry, but hope our Fruit Hill correspondent will.

In regard to the Shanghai chickens, we assure J

* Fl. Cestr. p. 283 *Agricultura Bot.* p. 147.

K. E. that the extravagant statement of the Rev. S. A. Bumstead, surprised us, as much as it did him, and we gave it a place in the Journal, only because we could not with propriety doubt the veracity of the reverend gentleman, particularly when endorsed by another; (the author of the work from which the extract was made.) We have written to Mr. Bumstead, and hope to receive a reply which will satisfy our correspondent.—ED.]

The Arboretum.

MR. EDITOR:—In looking over the two last numbers of the Farm Journal, I received much pleasure from reading the appropriate remarks of your lady correspondents, which I hope will be continued, and induce other ladies to communicate with your valuable periodical.

The love of the beautiful is a prominent trait in woman's character, and is worthy of the most assiduous cultivation, as a means of enjoyment. Aside from moral and patriotic motives, I know nothing more likely to develope this trait than flowers and rural scenery. I therefore append a list of hardy flowering shrubs, chiefly exotic, of early culture and adapted to the embellishment of "home, sweet home," hoping to continue it monthly, and occasionally planting a few beautiful trees and vines, among the shrubbery just to fill up the outlines.

Wiegela Rosea.—This truly beautiful shrub is new to most of your readers. It is of recent introduction into this country, having been sent to Europe from the north of China, by Mr. Fortune, during his recent botanical tour through that country. It produces in profusion, clusters of delicate rose-colored flowers, of a tubular form; it is quite hardy in all the middle States, and is a splendid addition to the shrubbery.

Spirae prunifolia pleno.—This unique shrub was found in the Japanese gardens, and introduced into Europe by that indefatigable collector, Dr. Siebold. It has a most graceful appearance when in flower, and grows to the height of about eight feet. The flowers are pure white, not larger than a dollar gold piece, and perfectly double. The petals of the flowers are very numerous and beautifully imbricated. The flower resembles in miniature a double ranunculus. It is beyond doubt the handsomest shrub of recent introduction, and as it is perfectly hardy in the most exposed situations, is entitled to a niche in every garden.

Azalea calendulacea—Is a native of the mountains of Georgia and produces in great profusion corymbs of flowers, varying in color from light yellow to bright flame, presenting a beautiful display during the month of May. It is perfectly hardy and prefers a damp shaded situation. Pursh says, "it is without exception the handsomest shrub in North America."

Cedrus deodara.—This splendid evergreen tree is

a native of the Himalayas, and attains a gigantic size; the habit of the tree is pendant and compact, and from the glaucous coloring of the leaves presents a silvery hue, contrasting beautifully with our dark-leaved evergreens. It is quite hardy. We cannot perceive that this tree bears any resemblance to the Cedar of Lebanon, as has been asserted. In consequence of its recent introduction into this country all the specimens are small. JAMES D. FULTON.

Philadelphia, August, 1851.

Mortality among the Poultry.

MR. EDITOR:—For the past few months there has been a very great mortality amongst the poultry in this county; so great as to destroy more than two-thirds that have been brought into existence this summer. Failing in my attempts to discover the cause of this vast havoc, I have embraced this mode and opportunity of awaking up some intelligent information upon the subject, and if possible arrest the disease that is prevailing amongst them. An intelligent and practical farmer within a mile or two of this place has just informed me that out of one hundred young chickens he has lost eighty-five by this prevailing though unknown disease. Our poultry when hatched look exceedingly well, until they are about four to six weeks old, when they begin to droop and hang their heads; refusing all kinds of food and apparently die instantaneously. The only perceptible change that can be observed with regard to color, is about the head, which is a very deep purple, and when that change does take place, I find it utterly impossible for them to recover. When I first discovered that they were dying so rapidly I was compelled to think the difficulty lay in the kind of food I gave them, but I changed their food several times, and I find that such is not the case. Can any of your subscribers account for this singular, though destructive disease, and a remedy for the same?

Very truly yours, JNO. P. TAGGART.
Bloomsburg, Aug. 15, 1851.

Bots in Horses.

MR. EDITOR:—All know, perhaps, that this disease is caused by worms in the stomach. When the worms begin to eat the stomach, it causes great distress, and the animal will lie down and roll in agony, and if relief is not obtained, the worms eat through in a short time, and the horse inevitably dies.

A few days since a fine horse was lying in our street, the owner exceedingly frightened not knowing what to do.

One of our neighbors saw the animal, and his distress, and that of his master, and promptly ordered a pailful of salt and water and a quantity of dry salt. He poured the salt and water upon the small of his back, and put the salt in his mouth, and in a few moments the horse was perfectly restored. As soon as he swallowed the salt, the worms ceased eating, and thus the life of a noble animal was saved which, but for this simple remedy, must have died.



THE HACKNEY.

Under this term are comprised the following:—the cover hack, the park hack, the lady's horse, the roadster, the cob, the galloway, and the poney.

The difficulty of procuring really good hacks is admitted by all persons who have kept them for the various purposes of either business or pleasure and for the following obvious reasons,—that very few people try to breed hackneys, therefore, although we require them to be nearly perfect in shape and action, (and perfect they should be to be "really good hacks,") they may be said to be failures in the breeding stud after all.

THE LADY'S HORSE.

The lady's horse is, after all, the most difficult to obtain, because he ought to approach very near to perfection. His paces, mouth, and tempor, should each be proportioned to the power and capability of his rider; and he should be proof against alarm from

either noises or sights which otherwise might cause him to run away. This description of horse should likewise be well bred, as in that case his action will be easier, and his appearance and carriage more in character with the generally elegant appearance of his rider. His pace should be the canter; the trot causes an ungraceful movement in the person of a woman, to rise to it; and if she do not rise to it, she is much shaken in her seat. Neither is the form of the side-saddle fitted for the trot; and the canter of a well-bitted horse is more safe, because his haunches are more under him in that pace than they can be in a trot. A good bold walk, however, with the head in proper place, is essential to a horse that has to carry a woman; and his action should be very true, that is, he should not "dish," or throw his legs outward, as the term is, in any of his paces, or he will cover the lower garments of his rider with mud when the roads are wet and dirty. To provide against the latter inconvenience, however, all horses intended for this

purpose, should not be much under fifteen hands and a half in height, which size corresponds with the lengthened drapery of a lady's riding costume. As a preventive against accidents, ladies' horses, however well broken and bitted, should not be too highly fed; and, if at all above themselves, should be ridden by a careful servant, with good use of his hands, before ladies mount them. It is, however, an acknowledged fact, that horses go more quietly under women than they do under men, which is accounted for by the lightness of their hand, and the backward position of the body, in the saddle. We have, in fact, known several instances of horses being very hard pullers with men, standing up in their stirrups, and, consequently inclining their bodies forward, but going perfectly temperate and at their ease under women.

The height of a road hackney must be regulated by the size of the person to ride him; but, generally speaking, from fourteen hands to fourteen hands and a half is the proper height. His strength must also be thus calculated, for a light man does not ride pleasantly on a horse equal to double his weight. But a road hackney should have strength of shoulder, with a round barrel, but not a large carcass, which only wears out his legs. His constitution and feeding can only be proved upon trial; but there are certain indices, such as deep ribs, brown color, hardy muscle, &c., which very rarely deceive us. As to the necessity of well-placed hinder-legs, it is most clearly shown by the answer given to the following question: If a horse make a serious blunder forward, and the centre of gravity of his body fall beyond the pillars of support, and is for a moment lost, what restores the equilibrium? Is it merely the chuck under the chin to an animal of his bulk and weight, and that "chuck" given perhaps by the weak, powerless wrist of a feeble old man, or delicate young lady? No: the main effect of the bit, or curb, in this case is, first, warning the horse of his danger; and, next, by momentary raising of his head, he is better able to bring a hinder-leg instantly to his assistance, by advancing it under his body, and thus restoring his equilibrium. In the walk, in fact, the horse actually begins to move by advancing the hinder-leg under the body, before the fore-leg quits the ground; and if he did not do so, there would be no equal support for the body, during the suspension of the fore-leg in the air, nor could the body be moved forwards, until the hinder-leg had, by quitting its station, taken a new point of support. Seeing, then, that in the walk, as in all other paces, the centre of gravity in the horse is maintained, as well as the body propelled, by the action of the hinder-legs, the greatest attention should be paid to the position and action of them in the hackney, as the best safeguard against his falling.—We should observe, then, when he is exhibited to our view, that, in his walk, the hinder-foot oversteps the fore-foot, at least a shoe's length, which a horse with straight, ill-formed hinder-legs cannot do; and if such action be accompanied by generally good hind-quarters, it is a great indication of safety, so far as one-half of the body of the horse is concerned. But as the false step is made, not with the hinder, but the fore-leg, the chief safeguard against falling is to be found elsewhere, namely, first, in the length of the shoulder, which throws the centre of gravity further back than a short one; and, secondly, proceeding also from the free use of the shoulder, in the act of setting the fore-foot down on the ground. It is a general but very mistaken notion, that the safety of a roadster depends upon his lifting his fore-legs high from the ground, when he is said to "go well above his

ground;" whereas it all depends on the manner in which he places them down upon it. Not only are the highest goers often the most unsafe to ride, for, when they do fall, they fall with a violence proportioned to the height of their action; but, although we do not advocate such extremes, there are thousands of instances of horses going very near to the ground, and never making a trip. It is, however, a well-established fact, that if the form of a horse's shoulder, and the consequent position of the fore-leg, enable him to put his foot to the ground, flat, with the heel well down, his lifting up his foot high, is not at all necessary; whereas, on the other hand, if, by any improper position of the leg, issuing out of a short, upright, ill-formed shoulder, the toe touches the ground first, and, as it were, digs into it; no matter how high such a horse may lift up his leg in any of his paces, he will always be dangerous to ride.—*Plough, Laom & Anvil.*

Hiving Bees.

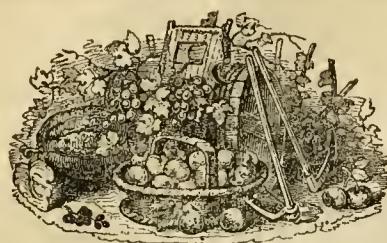
BY MRS. L. G. ABELL.

Reliable and useful facts, and hints, will make the Farm Journal the indispensable companion of the agriculturist, and if not already known to your readers, the following recent incident may be useful.

I threw open my blinds a few days since and raised a window, to inhale the pure air and take a morning look at the gay flowers that were in full blossom under the windows, when I heard a most unusual hum of bees; not seeing any on the flowers I looked into the air, and just over my head they were in agitated commotion preparatory to swarming from the hive of a near neighbor. On a fine locust, near the front door, they were soon settled, but before any effort could be made to hive them, they commenced flying, and all returned to the old hive. Next day they came out again, and a man who knew something of bees, was sent to hive them. He called for a long woolen stocking, and drew it on to the end of a pole, and placed it where the bees seemed thickest near a tree, as if they had selected it as a place where to light. He held it a few moments, and the stocking was very soon covered completely with the whole swarm.

A table had been spread with a white cloth and a hive all ready. He laid his pole or rather stocking of bees upon the table, and then put the hive over, while he carefully drew out the pole. In an hour or two the bees were all in the hive, and placed in the bee house—and in a short time more, they were at work furnishing their new home. While they were upon the table they "cleaned house" and dislodged every particle of dust and old matter adhering to their new abode.

In two days more another swarm came out from the old hive, and in the same manner the son and females of the family secured, in this simple and easy way, another fine swarm. The ladies told me as I watched their movements, they could now do it any time alone.



Horticultural Department.

Dwarf Pear Trees.

Being disappointed in the hope that some more able pen would have come to the rescue of the dwarf pear trees, and in reply to my friend Dr. Eshleman, in last month's number of the Journal, I venture a few remarks, in the belief that this mode of propagating the pear, is a valuable acquisition to the fruit grower, and that it is rapidly coming into general use. So far as the experience of this immediate vicinity goes, it has been quite successful; a large number that we have sold during the last two years being now in full bearing, and thrifty and vigorous. I had the pleasure of demonstrating this fact recently to the Dr. himself, in showing several varieties of dwarf trees, standing in the nursery rows, with several specimens of fair fruit each. They very often bear the same season they are transplanted, and I have at this time in my yard, an Easter Beurre with nine perfect pears on, moved last spring. How then are we to account for Dr. Thomas's trees which have been referred to, "as eight to ten feet high, well branched and cultivated with the greatest care," producing no fruit. The probability is that his exposure is unfavorable. He informs me that there have been a profusion of blossoms, and that the trees are vigorous, and as they bear abundantly at West Chester, only a few miles off, but at an elevation of some hundred feet higher than his residence in the valley, it is most likely that his failure results from the same cause that other fruit trees are unproductive in certain situations and exposure, viz: a liability to be cut off by late frosts.

Another reason why the pear on quince does not always succeed is, its being worked on our common orange quince. It has been fully ascertained that this stalk will not answer. I have known several cases in this neighborhood, where it has been tried and failed entirely. Even where they unite readily, it is found they will not grow freely together, the pear soon becomes stunted, dwindle and dies. In a conversation at the first convention in New York two years ago, with P. Barry, the experienced nurseryman, at Rochester, he stated this to be his experience, and that when failures occurred, it might generally be traced to this cause. The proper stalk for growing the pear on, is the imported Angier's quince, which is a mere variety of the orange, but is so free

a grower that it is almost exclusively used by nurserymen. We imported, last year, seven thousand stalks of it for this purpose, some of which have pear shoots on them four to five feet, the growth of this season. The Portugal quince is also a free grower, but does not strike readily from cuttings. It is quite distinct from either the orange shaped, both in the fruit and growth. Its leaves are broader, larger and more downy. It has no advantage whatever over the Anger's variety, as a stalk for the pear, even if its high price were not an objection.

Another difficulty sometimes occurs with dwarf pears in the quince borer. This insect works at the surface of the ground, and his attacks may easily be avoided, by planting the tree so deep as to cover the point of union. This rule should always be observed. The quince is not injured by deep planting like other trees, and throws out radicles under such circumstances very readily.

It has also been said the dwarf pear tree is short lived. This is mere assertion. The proof, so far, is decidedly the other way. T. Rivers, and there is no higher authority, says they are growing perfectly healthy and vigorous in the gardens of the Horticultural society, Cheswick, England, twenty-five years old, and that he has seen them on the continent forty years old equally healthy. In the gardens of many of many of the private residences in Philadelphia, they may be found eight and ten years planted, bearing delicious pears, with no sign of want of vigor, but quite the contrary. The pear on quince is less liable to blight than on its own stock, and the fruit of many varieties more perfect, and much improved in flavor. The finest, largest and most perfect butter pears we have ever seen, were grown on dwarf trees. The same may be said of the Duchesse d'Anglème and Louise Bonne de Jersey, two varieties at least second rate on pear stocks, but of the highest flavor on the quince, and standing in the first rank for beauty, size and quality. They are in fact specially to be recommended for this mode of culture, and for our own taste we should be satisfied without experimenting on the four hundred other varieties now known, for fear we might be in the predicament of the judge, who declined to hear the counsel for the other side, saying he was entirely satisfied of the merits of the case and was fearful if he heard more he might be confused. Most persons after tasting the fine buttery and juicy richness of these two pears, would be satisfied and ask for nothing better.

Certain kinds do better on quince stock than others, and are improved as before remarked in size, flavor and productions, and others only succeed at all by double working. The list of those which do well, embraces some twenty-five or thirty, amply large enough for the great majority of cultivators and including such well known fine kinds as White and Grey Doyenné, Buerre Diel, Gloux Morceaux, Made-

leine, Caster Beurré, Bartlett, St. Germain, Napoleon, Dearborn's Seedling, &c., &c.

To sum up the advantages in favor of dwarf pears, they are very hardy, come into bearing often after the first season of being moved, with good rich culture which they should always have, grow vigorously and bear plentifully. They may be planted eight to ten feet apart, thus taking up but little room, answering well to fill up the intervals in an orchard, and with the present scarcity of fine pears in the markets of our Atlantic cities, will probably yield, for the ground occupied, a better return than any other kind of fruit culture.

PASCHALL MORRIS.

8th mo., 9th, 1851.

P. S. It is a very common but erroneous practice to plant tender fruit, such as apricots, nectarines, &c. on a warm exposure, such as the south side of a house. A mild spell of weather in winter, or an early spring, brings on a premature development of the bud, only to be nipped by a succeeding frost. Such fruit trees, and indeed all others, from the great variability of our climate and the liability to sudden changes, should rather be planted on high ground, where there is a free circulation of air, and if possible with northern exposures, so as to retard their growth.

Notes for September.

The cultivator who has been absent during previous months is now the proud spectator of the fine autumnal growth of his young trees, and rich in the profusion and variety of autumnal fruits from older ones.

But trees lacking culture, standing in hard soil or among strong grass or weeds, make no "second growth" while young, nor can they yield rich fruit if old.

It is now too late to urge a growth this season—the late unripened shoots would be caught by frosts before they would become sufficiently woody and hardened. Unseasonable luxuriance of growth is one of the greatest sources of mischief incident to our irregular climate, and a common precursor of disease.

Instead, therefore, of stimulating growth at this season, it is exceedingly desirable to bring it gradually to a close. Thrifty, well-fed young trees, such as the dwarf pear trees alluded to in the July No. of the Journal (p. 114) may be checked with good effect by lifting or moving them in the ground so as to dis sever one-half or more of the roots, especially the vertical roots.

Those who have not set out their STRAWBERRY PLANTS, may do so now in a bed of good sod. They will become so well rooted as to be out of danger by lifting or freezing out during winter and will yield a partial crop of fruit next spring. In making the bed it is well to estimate how many rows of plants there will be, and how many plants in each row; and then

to procure just enough of the very best staminate and pistillate sorts to fill even rows of each. Thus in a bed 33 feet square there may be 20 rows and 20 plants in each row; and these might be arranged, for example, in something like the following order.

One row of White Bush Alpine, s.
Four rows Hudson, p.
One row Ross' Phoenix, s.
Four rows Rival Hudson, p.
One row Boston Pine, s.
Four rows Hovey's Seedling, p.
One row Early Scarlet, s.
Four rows Hovey, p.
One row Red Bush Alpine.

Growing trees may be pruned moderately now, as at any other season of the year (popular proverbs to the contrary notwithstanding). It is well to prune a little at different seasons, when much is required, as severe pruning at any time is *always* prejudicial.—Occasion for it is avoided by training young trees at first as they should afterwards grow.

Old RASPBERRY canes which have fruited may be cut away. Sometimes the young canes start a vigorous tender growth afterwards; they will especially need protection in November.

BUDDING is yet in season. One good rule is to place the bud promptly and boldly, without any subsequent displacement or adjusting. The tree should be well set with buds according to the size of the top, so as to avoid necessity for cutting away many branches larger than the finger.

Instead of taking the first scions at hand, select the best sort, and such as will yield fruit of a kind or season in which the garden is deficient. A few buds of a prime sort can be safely be sent in a letter to a considerable distance. If there is too large a proportion of some varieties of fruit in a garden, or if some trees produce inferior fruit, the sooner they are changed the better, provided they are young and healthy; if they are old, they will scarcely repay the trouble of grafting, and the much greater consequent trouble of dressing.

W.

For a further elucidation of the points of culture adverted to above, see "The Fruit Grower's Hand Book," pages 108, 99, 91, 120, 118, 87, 120, 7.

GEN. HAND PLUMS.—Dr. E. Parry, of Lancaster, has laid on our table several superb plums of the Gen. Hand variety. On measuring them we found them to be 7½ inches each in circumference and weighing each one-fourth of a pound, less three eighths of an ounce. Although of extraordinary size, these are not as large as several taken from the tree last season, one of which measured 8½ inches. While in point of rich melting flavor the Hand plum is inferior to the Washington and several other varieties, it undoubtedly stands at the head of the list of plums in point of size, and for preserving purposes is much esteemed.

Horticultural Societies.

Proceedings of the Pennsylvania Horticultural Society.

The stated meeting of this association for the month of August, was held in the Chinese Saloon, on the 19th. The President in the Chair. The hall was immensely crowded. The object which brought together so much of the beauty and fashion of the city was the announcement that it was expected a fine specimen of the *Victoria regia* might be seen, as a bud which had appeared above the surface of the water on Monday morning, grew so rapidly and had become so enlarged, that the proprietor (our worthy President) felt confident that it would have been expanded by the time of the meeting. In this he was disappointed, and therefore the bud remained unent. The immense leaf, however, was brought in, much to the gratification of the visitors. Its diameter is six feet four inches, or nineteen feet in circumference, peltate and of circular form, emarginate at that portion of the leaf which had been the point when it first appeared, and also notched at the opposite margin where the lobes have become united by a suture.—The leaf at first is sagittate, and as it grows and expands, the lobed portions of the margin, forming its arrow head shape, unite by the suture, and the leaf becomes peltate and circular; and in its prime is salver-formed, the edge being turned up one and a half to two inches. The venation is remarkably prominent, and of such symmetry and firmness, that it first conveyed the idea of great strength in its construction to Mr. Paxton, the architect of the great Crystal Palace, therefore adopted it as a model in the formation of the frame work of the roof of that extraordinary structure. The petiole is large, round, and rope-like, and of considerable length. It is, as also the whole of the reticulate veins are, beset with sharp spines. The entire under surface of the leaf is of a beautiful purple tinge. A representation of a flower of the *Victoria regia*, in wax, obtained by A. Kimber in Europe, was exhibited. This model was taken of a specimen sometime after expansion: The flower is more beautiful when it first opens in its cup-like appearance than as represented by the model shown. As the plant is in a flourishing condition and is showing a succession of buds, no doubt flowers will be exhibited at the grand autumnal display commencing on the 17th of September.

In the fruit department there was numerous dishes of the various kinds of the season. On the tables were seen superb bunches of Black Hamburg grapes, from the institution of the Insane, and fine specimens of the same variety from the houses of D. B. Taylor and Mrs. John B. Smith, and handsome bunches of the White Chasselas from Mrs. H. M. Rowland. Luscious specimens of the Cochin China variety, from Joseph S. Lovering's, and a fine collection, consisting of several varieties, from Joseph Ripka's house. Beautiful Nectarines of the Elrige, Vermash, and new white varieties, from the President's, Red Roman and Pitt-maston Orange kinds, from D. B. Taylor's and Mr. Fergusson's, and fine varieties from James Dundas' house; Plums, very fine, by Capt. Marston, variety not recognised; Mammoth variety by A. Parker; Greengage by G. W. Earl; a blue variety by Mrs. N. A. Roe; the Cleavenger variety, by W. S. Cleavenger, and the Queteh by Mrs. Wolbert. Finely flavored and beautiful Cayenne pine-apples, grown at the President's, were exhibited. Dishes of very large and delicious peaches, by H. W. Cleaveland, of the Crawford's early variety; by John Perkins, the heath

free; and a seedling of merit by Isaac B. Baxter.—Of pears, Mrs. John B. Smith exhibited fine specimens of the Bartlett, Cailot Rosat, Washington, Bezi de la Motte, Chamontelle, Moyamensing, Andrews, and *Ah Mon Dieu*; Robert Buist, the Andrews and Duchess de Berri; Charles Downing, the Dearborn's seedling; John R. Brinekle, the Esperion, St. Ghislain, and three unnamed varieties from France; A. M. Eastwick, the De Witt, Bartram, Ronselet de Rheimer, Seekel, and a seedling variety; Geo. W. Earl, the Julienne. Early butter by Mrs. N. A. Roe, and three varieties from Miss Gratz. Apples by Jno. Perkins—The Porter, Hagloe, Maiden's Blush, Hawthornden, and Pearmain. Mr. Buist presented a table of interesting plants, in pots. John Ellis exhibited a very large basket of cut flowers from the President's grounds; and a most beautiful one, a fair bijou, by Henry A. Dreer; and by Robert Kilvington, one of native flowers. Anthony Felton, Jr., extensive display of vegetables, and John Gallagher, gardener to Miss Gratz, a large collection.

The Premiums awarded on the occasion were—For the most interesting collection of plants in pots, to James Roby, foreman to Robert Buist; for the best hand bouquet, and second best design of cut flowers, to Robert Kilvington; for the best basket of cut flowers, to John Ellis, gardener to C. Cope; and the second best to H. A. Dreer; for the best of indigenous flowers, to Robert Kilvington.

Grapes.—For the best three bunches of a black variety, the Black Hamburg, to Jno. Riley, gardener to the Insane Asylum; for the second best, the same variety, to Wm. Hamill, gardener to D. B. Taylor; for the best of a white variety, the Chasselas, to Peter Manning, gardener to Mrs. H. M. Rowland; for the second best, the Cochin China, to John Miller, gardener to J. S. Lovering.

Nectarines.—For the best six specimens to James Bisset, gardener to James Dundas; for the second best to Wm. Hamill, gardener to D. B. Taylor.

Plums.—For the best, the Mammoth, to Alexander Parker; for the second best to Capt. Marston.

Peaches.—For the best, the Crawford's Early, to H. W. S. Cleveland; for the second best, the Heath free, to John Perkins.

Pears.—For the best, the Butter, to Geo. W. Earl; for the second best, the Washington, to Mrs. J. B. Smith.

Apples.—For the best, Permain, to John Perkins; for the second best, the Maiden's Blush, to the same. And a special premium of three dollars for a splendid collection of Grapes to Alex. Burnett, gardener to Joseph Ripka. And for two Pine Apples, very fine, a premium of one dollar to John Ellis, gardener to C. Cope.

For the best display of vegetables by a market gardener, and for the second best, to Anthony Felton, Jr. For the best display by a private gardener to John Gallagher, gardener to Miss Gratz. The committee notices two dishes of fine Egg Plant fruit, by John Miller, gardener to Jos. S. Lovering.

The committee on fruits reported that they had examined the following fruits *ad interim* since the last meeting, viz:

Fine specimens of the Bloodgood, Dearborn's seedling Ananas d'Ete and Benoit pears, from Charles Downing, Newburg, N. Y.; the Gratz, Mather and Ott pears, and Cleavenger plum.

The Bloodgood, Dearborn's seedling, Ananas d'Ete and Benoit, were of the finest quality, the last was particularly fine. The Gratz was of good quality and believed to be synonymous with Julienne. The Mather is a large fair native pear of Delaware county,

of great productiveness, but wants flavor. The Ott, as heretofore, sustains its high reputation, excelling in quality all the other summer pears.

The Cleavenger is a native, purple, free plum of the largest size and of good flavor.

Deferred business—being the amendment to the By-Laws reported at the last meeting was taken up and adopted by adding a new article with sections as follows:

ARTICLE 17. Sec. 1. Professors of Entomology, Botany and Horticultural Chemistry.—At every annual meeting of the society, there shall be elected a professor of Entomology, a professor of Botany, and a professor of Horticultural Chemistry. It shall be their duty to deliver before the society occasional lectures on subjects connected with his professorship.

Sec. 2. Committee on Entomology.—A committee of five shall be appointed, at the stated meeting in February, to be called the committee on Entomology. The professor of Entomology shall be appointed in this committee and he shall be its chairman. It shall be the duty of the committee to report on all entomological subjects that may be referred to them; and whenever they deem it expedient to make reports on the history, habits, &c., of insects injurious to vegetation, as well as those that are beneficial to the horticulturist.

Sec. 3. Committee on Botany.—A committee of five shall be appointed at the stated meeting in February, to be called the committee on Botany. The professor of Botany shall constitute one of this committee and shall be its chairman. It shall be the duty of the committee to correct the names of all plants erroneously labelled, which may be exhibited at the meetings of the society, and to report on all botanical subjects that may be referred to them.

Sec. 4. Committee on Horticultural Chemistry.—A committee of five shall be appointed at the stated meeting in February, to be designated the committee on Horticultural Chemistry. The professor of horticultural chemistry shall be a member of this committee and shall be its chairman. It shall be the duty of this committee to report to the society the constituent elements of such soils, fruits, trees and plants as they may have analysed.

A very interesting communication from John Ellis gardener to Caleb Cope addressed to the Secretary, was read describing in minute detail the *Victoria regia*, its growth *ab origine* at Spring Brook farm, giving its stages, developement as it advanced from the time the seed was planted, on the 21st day of March last, to the present time. On motion adjourned.

THO. P. JAMES,
Recording Secretary.

Proceedings

Of the meeting of the Executive Committee of the Pennsylvania State Agricultural Society.

HARRISBURG, Tuesday, July 29, 1851.

The Committee met. Present, Hon. F. Watts, Jas. Gowen, Hon. A. O. Hiester, David Mumma, Dr. L. Reilly, George H. Bucher and Isaac G. M'Kinley.

On motion, JAMES GOWEN was appointed chairman and Isaac G. M'Kinley, Secretary, *pro tempore*.

Mr. Hiester, from the committee to make arrangements for the holding of the Agricultural Exhibition, made report that a field had been obtained for the purpose, within a mile of the borough of Harrisburg; and that Rules and Regulations for the government of the Exhibition, and a list of premiums to be offered, were being prepared for circulation throughout the State.

Mr. Watts from the committee on the Address, reported that they had not yet made a selection of a gentleman to deliver the address, but he expected they would be able to report by the next meeting of the Committee. Adjourned.

To the Lady readers of the Farm Journal.

BY MRS. L. G. ABELL.

If it could be really arranged as some would have it, that woman should have the right to go to the polls and contend with man in political faction and strife; could she be *privileged* to become the skilful operator in surgery, lay bare the lacerated flesh, and see the severed limb, as dismembered from the body; could she attend our civil courts, and meet with the vulgarity and roughness, be assailed with the coarse jeer and profane epithets to which man is daily accustomed, how long would she be characterised by refinement and delicacy?

Woman is naturally *impulsive, tender* and *yielding*. These qualities lovely in her character, and the very soul of domestic comfort might not answer quite so well, in the just and stern decision of a criminal case, where the omnipotence of the law demands the life of the offender!

To Young Men who read the Farm Journal.

I have been looking on, and listening to the voice of the world, and the question is—What are we coming to? what shall we do for young men of worth, of character, of sobriety?

There is in our land, so much of the spirit of rowdism, intemperance and their accompanying vices that some have taken the alarm, and enquire, “what shall we do?” Intelligent sons of farmers, and all others who have strength of mind, and principle enough to withstand the tide of temptation, and moral delinquency, your time is coming. Go on in the ways of virtue and intelligence—lay a sound and thorough foundation, and a beautiful temple of respectability and character will be reared thereon!

Despair not of ultimate success, even though now unknown. The time is coming as sure as days pass away, when you who pursue the right, will be wanted! What a flood tide of the young dissolute ones will in a few years more be swept from the earth, or be mere hangers on to the outskirts of society. Then you will be needed, in the strength and beauty of a pure and upright manhood, with an eye clear with beaming intelligence, and a heart shining out in the beauty of goodness, to give consistency to action and integrity to principle. Yes, you will be needed in our halls of legislation, to be our councillors, our law makers and protectors.

Spare no labor or expense in education—cultivate all your faculties—be earnest, true and faithful for the time is coming.

Chittenango, N. Y.

THE FARM JOURNAL.

Sub-Editor's Department.

A. M. SPANGLER, SUB-EDITOR.

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Those having business to transact with us will please call at the Book Store of W. H. Spangler, in North Queen street, Lancaster, where we or our representative will at all times be in attendance.

Newland's Strawberry Humbug.

The editor of the New England Farmer speaking of Newland's strawberry, which he pronounces a "humbug," says:

We see by a late number of the Pennsylvania Farm Journal, that the editor has received a present of some vines from Newland's agent, and before waiting to give them a trial he is commanding them to the public; thus aiding this imposter in deceiving the farming community. We think notice should be given of the imposition throughout the country in order to put a stop to the operations of this impostor. Editors should check, rather than aid him.

We did speak well of the plants sent us, but certainly not with the intention of aiding Mr. Newland in imposing upon the public. We merely gave Mr. Newland's own statement and referred to the recommendations given them by a number of persons. If any persons were induced to purchase them on the strength of what we said, we deeply regret it. We never have, knowingly, and never will lend our columns to the cause of imposition. Our object is the dissemination of valuable truths, and if, as in the case above referred to, we ourselves are sometimes deceived, we hope that it will not be regarded as an evidence of a disposition on our part to deceive others.

CORRECTION.—In the third paragraph and fifth line of Mr. P. Morris' article on "Evergreen Trees and Shrubs," in our last number, the word "deodar" should have preceded that of "cedar." The accidental omission of it in the copy, drew from us a small note which places Mr. M. in the awkward position of calling the common red cedar a tree of "lively tints and graceful habits." We make the correction with much pleasure.

State Agricultural Exhibition.

We have issued a supplement to the Journal containing a "List of Premiums and Rules & Regulations for the first Cattle Show and Agricultural and Horticultural Exhibition, to be held by the Pennsylvania State Agricultural Society." To this premium list we earnestly invite the attention of every friend of agriculture in our State. The ensuing State Fair will be an event fraught with the highest importance to the prosperity of Pennsylvania. Not only are her farmers deeply interested in rendering it a creditable affair, but the interests of every mechanic and professional man within her borders will be more or less affected by it. Let the Farmer, the Mechanic and the professional man go hand in hand, and shoulder to shoulder help on the good work. From every hill, valley and plain, let the products of honest industry be brought, until the thousands who assemble at Harrisburg will be taught to know that the full extent of the resources of the Keystone State have never been thoroughly understood. If, as we anticipate, our farmers manifest a proper degree of interest, we predict that the display will be one that will cause a thrill of honest pride in every Pennsylvanian's heart, and will lay the foundation for future exhibitions that will be surpassed in excellency by no other in the Union.

Our exchanges throughout the State will confer a special favor upon the cause of agriculture by publishing the premium list at length and calling attention to it.

ENAMELED IRON MILK PANS.—We are indebted to Messrs. Savery & Co., of Philadelphia, for a nest of iron milk pans, for which they will please accept our thanks. These pans are beautifully enamelled on the inside, and are of a form admirably adapted for cleanliness and prevention of rust. Although more costly than the common earthenware, or tin pans, they are cheaper than the glass and have the advantage over the latter of being less liable to be broken by a fall or a blow. Their strength was satisfactorily tried in our presence by the manufacturers, who threw them a distance of several feet on a hard floor, without breaking. We have not yet had an opportunity of proving their value as milk pans, and can therefore only speak of their form and material, leaving it for the dairymen to test their true merits.

PENNSYLVANIA TOBACCO.—In our last, we spoke of the unusual quantity of tobacco growing in our State the present season, and of the unfavorable appearance it at that time presented. Since then, refreshing rains have fallen, and although many fields have not nor are likely to recover fully from the effects of the drouth, the general appearance of the crop has been much improved. Many large growers claim a full crop, and as prices promise to be nearly equal to those of last year, their profits will be large.

Peach Culture.

"Why is not more attention given to the culture of the peach in Pennsylvania?" was inquired of us by an ardent friend of fruits, a day or two since.—The query had frequently before presented itself to our mind, as one of great interest and importance.—That the soil in very many sections of our State is peculiarly adapted to the cultivation of nearly all the stone fruits, is unquestionable. The gratifying success which has attended every well directed effort should satisfy the most skeptical, that Pennsylvania is a region especially favored in this particular. Our climate, too, is all the peach grower could desire, so that the almost total indifference on the part of her people alone, prevents our State from becoming as famous for choice peaches, as she has long been for fine grain. It makes a New Jersey man's heart ache to look upon our noble peach trees, from one *limb* of which, at least three fully matured Jersey trees could be made. And then the difference in duration. A Jersey fruit tree generally comes to full maturity in three years. Four years at farthest is sufficient to complete its growth and then having thoroughly impoverished the soil, it literally dies of starvation. A Pennsylvania peach tree, on the other hand, bears equally as much and decidedly richer flavored fruit at three years, and then continues increasing in size vigor, producing with each successive year larger and better crops for fifteen or twenty years successively. Wherever properly attended to, it thrives and bears well for at least fifteen years, and without any cultivation at all, the bearing life of our peach trees on our mellow loam soils will average ten years.

In the face of all these facts, New Jersey for many years held the immense profits of the peach crop, supplied to the Philadelphia and New York markets, almost entirely in her own hands. Recently, little Delaware has put in a claim for the spoils, and the superiority of her peaches has nearly driven our Jersey friends from the Philadelphia market. Hundreds of thousands of dollars have thus, for a long period, been annually paid for fruits which, with comparatively trifling cost and labor, our citizens might have grown themselves, and that too of a size and flavor infinitely superior to those brought from New Jersey and Delaware, and for which they pay most exorbitant prices.

Very few persons are aware of the difference between the flavor of peaches grown upon our stronger, heavier soils, and those cultivated in the light sands of Jersey. This is attributable not to a want of taste on their part, but to the fact of their rarely having an opportunity of comparing the merits respectively of the two kinds. While the former is richly flavored and possessed in perfection of all the qualities which gives the peach its pre-eminence as a fruit, the other is generally watery and insipid, or

impregnated with acidity to such a degree as to render it almost unfit for eating.

We venture the assertion, bold as it may appear, that in Lancaster county may now be found a larger variety of superior peaches—superior in size, and richness of flavor—than can be produced in any three counties in New Jersey, and that there are now growing in her soil, trees in full, luxuriant vigor, which have borne heavy crops of delicious peaches for twelve successive years, and one of which will produce more fruit in a single season than two average sized Jersey trees will produce during their whole life time. The same may doubtless be said of peach trees in the counties of Chester, Montgomery, Bucks, Delaware, Philadelphia, or in fact any of the old counties of the State.

Looking at the subject, then, in a money point of view alone, does it not assume an important aspect? Should not our own people give their attention to the culture of a fruit than which is none more delicious or profitable. If a correct estimate could be made of the amount paid by Pennsylvanians for New Jersey and Delaware peaches, it would doubtless awaken a deeper feeling of interest.

PROTECT YOURSELVES AND YOUR PROPERTY.—The past season has been full of warning to our farmers. Never within our recollection has there been in any one summer so many accidents from lightning. Almost every day, accounts of the awful destruction of lives and property have reached us, and in every instance where these accidents have happened to dwellings or barns, the usual protection of lightning rods was wanting. Now, when it is remembered that every farmer has it in his power fully to guard against these accidents, does not his neglect to do so render him highly culpable. We think so. A comparatively small amount expended for lightning rods ensures the safety of the family and property, and during the prevalence of storms, relieves the mind from the dread and anxiety usually felt by those who are without these important appendages to their buildings. We therefore say to every farmer, put up lightning rods at once, and while you are about it, put up those of the most approved kinds. The magnetic lightning rod, patented and manufactured by Thomas Armitage, Vine street, Philadelphia, is pronounced by scientific men the best in use, and we commend it to the attention of our readers.

THE CORN CROP.—The refreshing rains which fell in our vicinity during the middle and latter part of August, in a measure revived the drooping corn, and assisted materially in filling the ears. It now looks vigorous and healthy, and a tolerable fair crop may be anticipated, though not so large as it promised to be, earlier in the season. We are pleased to learn that nearly every section of the State enjoyed the blessings of fine showers about the time we received them.

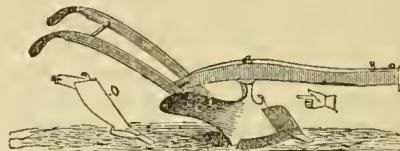
Fruit Stealing.

Will some of our readers, versed in the philosophy of morals, define for us the difference in criminality between robbing a man's orchard and robbing his house. The law, we are aware, makes a broad distinction between the two; but this is a distinction without a difference. Why the theft of a man's household property or money should be considered a more heinous crime in the eye of the law, than the plundering of his orchard or garden, and the mutilation of his fruit trees, is beyond our comprehension. Yet such is the case, and without legislation on the subject, such it is likely to remain. To such an extent are these outrages upon the rights of fruit growers practised, that there is a loud call for protection, and we urge upon our farmers and fruit growers, the propriety of laying their grievances before the legislature and demanding redress.

The complaint is general, and what renders it more aggravating is the fact that many of these fruit thieves are persons loudest in their condemnation of dishonest practices. We know persons who shrink with holy abhorrence from the most remote imputation of theft, yet who, without any scruples of conscience, enter a neighbor's orchard or garden, and clandestinely carry away his choicest fruits. We know parents who encourage thieving practices in their children, by receiving the fruit thus taken by them from others without permission. And yet these same parents would feel highly indignant were their children called thieves. They send them to sabbath schools, punish them for profanity, will not permit them to associate with bad boys; but indirectly encourage them to steal a neighbor's fruit. Strange inconsistency, but no less strange than true. We cannot conceive how any man or boy possessed of a single spark of moral honesty, can so far forget the duty he owes his conscience and society, as to rob a fruit tree. We consider the man who steals his neighbor's apples or peaches as much a thief, as he who picks his pocket, and were we the arbiters of justice would punish him as severely. And such should be the estimate placed upon this mean pilfering by the whole community.—If the voice of public sentiment were raised against it, and the fruit thief regarded as he should be—an equal with the pickpocket and burglar—there would then be some little encouragement to cultivate choice fruits; but so long as he is regarded and treated as an honest man so long will our farmer's orchards be plundered and the product of years of anxious toil carried away by dishonest men.

PENNSYLVANIA SEEDLING FRUITS.—It is universally conceded that Downing's Fruits & Fruit Trees of America is a work of rare merit—the best on the subject, and indispensable to every horticulturist—yet it is far from comprehending the whole of our choice fruits, and in confirmation of this opinion we refer to

the fact that in the vicinity of Lancaster alone, may be found more than twenty choice varieties of pears, apples, peaches, plums and cherries, which, although well known and appreciated by our citizens, have never been described by Mr. D., or any other author. Other sections of our State are doubtless equally rich in fine seedling fruits, and it is our intention, as soon as practicable, to trace their history and furnish illustrations and descriptions of them. In furtherance of this object, we earnestly request that those who have seedling fruits will be kind enough to furnish us with samples of them, to be placed in the hands of competent persons who will decide upon their merits and describe them, and the newspaper press of our State will confer a special favor by noticing our request. We regret that the lateness of the season as well as the general defectiveness of fruit this year prevents us from entering upon this work at once, with those fruits which are grown in our immediate vicinity. Next season we shall commence the good work in time.

Hope's Improved Plow.

The above cut represents a plow with Hope's new improvement attached. A great difficulty with plowmen has always been the clogging of their plows and the want of adequate means for cleaning away the weeds, grass, stubble, &c. Many attempts have been made to remedy this evil, but with only partial success, as no improvement with which we are acquainted has been entirely successful in clearing away the impediments to the sinking of the plow into the ground. Mr. Hope claims for his, a complete triumph over the difficulty. Its merits were severely tested a few days since on the farm of W. Dunlap, Esq., near Philadelphia, and the result was most satisfactory. *Wet rye straw* was placed before it to the depth of six or seven inches, and plowed under without the least difficulty. Reports of the trial state, that it was impossible to choke it with rubbish.

This improvement, as will be seen by a reference to the engraving, is of the most simple character and may be added to any of the ordinary plows now in use, at a trifling expense. It consists of the *recurred point* of the mould board, which effectually turns aside and guides backward the choking material. We have not seen the plow in use, but hope that it may realize the inventor's most sanguine expectations, as an effectual plow cleaner has long been a desideratum with our farmers.

SEEDS should always be kept in bags, in a dry, airy situation.

Horticultural Implements.

For the following cuts of gardening tools and the accompanying description, we are indebted to Robert Buist, Esq., nurseryman of Philadelphia. They appeared originally in the "Family Kitchen Gardener," a work which should be in the hands of every farmer, and of which Mr. B. is the author. We know of no treatise on gardening, we can more confidently recommend. The different subjects are treated in a clear, familiar style, and from the extensive practical experience of the author, may be confidently relied upon.

It is not our intention to go into a detail of all the useful articles connected with the culture of the garden, which would take us beyond our limits. Our object will be only to point out those most useful and essential to carry on the cultivation of the soil. The materials of which they are composed are chiefly of iron and wood; the best quality of both should be used, nothing purchased merely for its being cheap. The cheapest is the best and most durable to accomplish the end.

The spade is a very common tool, and should be of steel, with a hickory or ash handle, having two rivets through its head. No. 2, of the manufactory, is the most convenient size. Some American spades are equal to any of British manufacture.

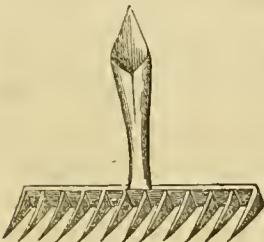


Fig. 1.

ground. The handle should be round, made of pine, or any light wood, and from six to eight feet long.

Beet Rake, (Fig. 2.)—This very useful implement is composed of hard wood, with steel teeth, obtusely pointed, about two inches wide, five inches long, and from nine to twelve inches apart. It is exceedingly useful in drawing drills in which to sow Beets, Carrots, Onions, and all small seeds or roots.



Fig. 2.

In using it, strain the line, and draw with some strength; when three drills will be made at once, saving the labor of moving the line so frequently as when the work is accomplished by a bore.

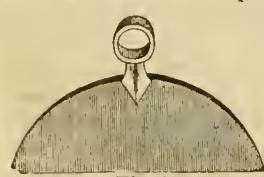


Fig. 3.

ten inches. Those of three, five, seven and nine inches are generally used.

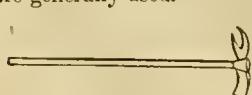


Fig. 4.

Hoes are of many and varied descriptions and shapes. Fig. 3 gives an idea of the most useful. They should be of the very best of steel, with rather strong, round handles, five feet long. They are in sizes from three to

Pronged Hoes, Fig. 4, are very useful, indeed indispensable, for stirring the soil and destroying weeds. They are of steel or malleable iron

the latter is generally used, though the former is preferable; handles four and a half feet long.

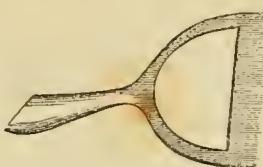


Fig. 5.

to the Draw Hoe, Fig., which is best adapted for all heavy work.



Fig. 6.

The *Reel and Line*, Fig. 6. The reel is of wood or iron; the latter is preferable. It consists of two parts, the shank and head. The head turns round on the shank and winds up the line or cord, which can be of any length.

The *Trowel*, Fig. 7. is very useful for removing plants and lifting them with balls of earth for transplanting. It should be of the best iron or steel, with a square socket into the handle,

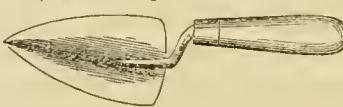


Fig. 7.

and from five to nine inches long, exclusive of the handle.

The *Dibbler* is a short piece of round wood, generally made from an old spade or shovel handle, about one and a half feet long, obtusely pointed, frequently shod with iron on the one end, and conveniently formed for the hand on the other. It should be well made, as it is of very general use, and if iron-shod, will last half a century.

WHO'S TO BLAME?—What is wrong with the Philadelphia post office? Quite a number of our city subscribers complain that they have failed to receive their Journals regularly. Now, were it not for the fact, that we have been scrupulously careful in mailing the Journal to every subscriber, we would be willing to believe that we were in fault; but having on several occasions mailed numbers a *second* and even a *third* time, which failed to reach the persons for whom they were intended, we charge the delinquency on the post master, and hope he will endeavor to avoid this neglect in future.

STRAWBERRY PLANTS.—We received on the 13th ult., from Messrs. Ellwanger & Barry, of Rochester, N. Y., a basket containing ten varieties of strawberry plants, all in good condition. Our ground being ready, we immediately set them out, and they are now looking very well. The following are the varieties: Ellwanger & Barry's seedling, No. 1, Bishop's orange, Large early scarlet, Burr's new pine, Hovey's seedling, Boston pine, Genessee, Prolific hautbois, Rural, Hudson. We refer our readers to Messrs. E. & B.'s advertisement in another part of the Journal.

Lancaster County Plowing Match.

A large and highly respectable meeting of those friendly to a Plowing Match, to be confined to Lancaster county plows and plowmen, was held in Lancaster on the 30th ult., Hon. A. L. Hayes, chairman, A. M. Spangler and Jacob Eshleman, Secretaries.—A committee of arrangements composed of five persons was appointed, as follows: Jacob Frantz, Henry M. Reigart, Jacob Rohrer, Christian B. Herr, and Jacob Peters. An assistant committee, composed of one person from each township in the county was also appointed. We are compelled to omit the names of this committee for want of space. Monday, September 29th, was the day appointed, and the immediate vicinity of Lancaster the place for holding the match.

Daniel Hamaker, C. B. Herr and John Bachman were selected as judges. The rules and regulations will be nearly the same as those governing plowing matches generally.

We are pleased to see Old Lancaster at length making an advance in this direction. Every effort to get up a county fair this fall, failed. Such, however, will not be the case with the plowing match, as the premiums are very liberal and already a number of competitors have announced themselves ready for the contest. The premiums are as follows:

For the best plowman.	\$40 00
“ “ second do.	30 00
“ “ third do.	20 00
“ “ fourth do.	10 00
“ “ fifth do.	5 00
For the best plow,	10 00
“ “ 2d do.	5 00

The warmest interest is manifested in every part of the county in regard to this match, and we predict that it will pave the way to a regular annual plowing match and fair. At least we hope so.

County Agricultural Fairs.

During the months of September and October the different county societies in the State hold their annual and semi-annual exhibitions. We regret that we are unable to give a complete list of these societies, their location, and time of holding their exhibitions. Will not the Secretaries be kind enough to keep us advised of these things?

The State Fair will be held at Harrisburg on the 23d, 24th and 25th of October.

Chester co. Hort. Society, 11th, 12th & 13th of Sept.

Montgomery co. 1st and 2d October.

Bucks co. 1st of October.

Phila. co. Agr. Society, 8th and 9th of October.

Grand Plowing Match at Norristown, first Tuesday of October.

Lancaster co. Plowing Match, September 29.

SEVERAL valuable communications have again been crowded out. They will appear in our next.

CLUB SUBSCRIBERS.—Several friends who have kindly raised club lists for our Journal wish to know whether we will receive additional subscribers to their lists already furnished, at club prices. Certainly.—We shall be pleased to send the Journal to any persons who may wish it, at our lowest club prices, if their names are forwarded by any of our friends who have already sent in club lists.

THE Grand Autumnal Exhibition of the Pennsylvania Horticultural Society will be held in the Museum Building, on 9th & George sts., Philadelphia, on the 17th, 18th and 19th days of September inst. This doubtless will be one of the handsomest displays yet offered to the public, great efforts are being made by the committee having it in charge to that end.

Book Notices.

The American Pomologist: containing finely colored drawings, accompanied by letter-press descriptions of Fruits of American origin. Edited W. D. Brincklé, A.M., M.D. Published by A. Hoffy, 193 S. 7th street, Philadelphia. 1851.

Dr. Brincklé is well known to the horticultural world as an ardent cultivator and successful experimenter in the department of fruits, of which he has originated some important varieties; whilst his sound judgment and general knowledge of the subject peculiarly adapt him for the task he has undertaken.

Mr. Hoffy is an excellent artist upon subjects of this kind, and he not only makes the original paintings from the specimens, but transfers them to stone, and superintends the coloring, so that every care is taken to have the illustrations accurate.

The first number is now ready, and is a stout quarto with ten beautiful plates, colored by hand in a careful and chaste style, affording an excellent representation of the various subjects. These comprise four varieties of *pear*, one *apple*, one *peach*, one *apricot*, one *cherry*, and two *raspberries*, the last being among the doctor's originals. Having recently seen these growing on the editor's premises, we can vouch for them as being superior varieties in point of size and flavor.

This work is well printed upon the best paper, at the low price of *two dollars* a number, and whilst it interferes with no other work (being devoted exclusively to the varieties which have originated in America) it has peculiar claims upon all who are desirous of knowing the names and quality of our choice fruits and the advanced state of their cultivation amongst us; whilst its merits as an ornamental volume must secure for it a place amongst illustrated works on flowers and kindred subjects. It will be published not oftener than once in three months, and four numbers will form a volume. It can be received by mail without injury to the plates, as it is sent in a roll and not creased by folding.

The Model Architect, containing original designs for Cottages, Villas, Suburban Residences, &c., accompanied by explanations, specifications, estimates and elaborate details, prepared expressly for the use of projectors and artisans throughout the United States, by Samuel Sloan, Architect. E. S. Jones & Co., S. W. corner 4th and Race streets, Philadelphia.

Nos. 1 and 2 of this valuable work have been kindly laid on our table by the publishers. Time and space will not permit us to notice it as it deserves.—We shall do so in our next. In the meantime we commend it to those of our readers who desire a work of the character indicated by the title.

TERMS OF PENNSYLVANIA FARM JOURNAL

In order that the FARM JOURNAL may be placed within the reach of every one who feels interested in the progress of Agriculture, we ask attention to the following terms:—

SINGLE COPIES,	-	\$1 00 Per Annum.
FIVE	"	4 00 "
TEN	"	7 50 "
TWENTY	"	15 00 "

It is not required that all papers in a club should be sent to one office. We will mail them (in wrappers,) to as many different offices as may be necessary. We make this arrangement in order that persons residing in different neighborhoods may unite, and form large clubs, and thus secure the "JOURNAL" at the very lowest club rates.

Our Terms are CASH IN ADVANCE. The exceedingly low rate at which the Journal is furnished renders this imperative. Subscriptions may be sent at our risk, and money at par where subscribers reside, will be taken. Where the sum to be sent is large we prefer that a draft should be procured, if possible.

Subscribers and Post Masters are invited to act as Agents. A receipt will always be sent with the first number of the copy subscribed for.

All letters must be addressed, *post paid*, to the publisher.
A. M. SPANGLER,
Lancaster, Pa.

FARMERS PROTECT YOUR HOUSES & BARNs.

So many accidents have happened from lightning during the past summer, that every prudent and careful farmer should at once adopt such means as will be most effectual in preventing them.—When it is remembered that certain safety may be secured at a very trifling expense, it becomes the duty of every farmer and good citizen to avail himself the proffered means. By so doing, he not only secures his property from fire by lightning, but protects also his family and those around him. These are important considerations and should have great weight. Those who desire a Lightning Rod, pronounced by the first scientific men in our country, the very best in use, will find it on application to THOS. ARMITAGE, at his *Magnetic Lightning Rod Factory*, Vine Street, 3 doors above 12th, Philadelphia. These Rods are finished with all the improvements at nearly the same prices as the old kind. (t1)

PAGE'S CIRCULAR SAW MILLS.

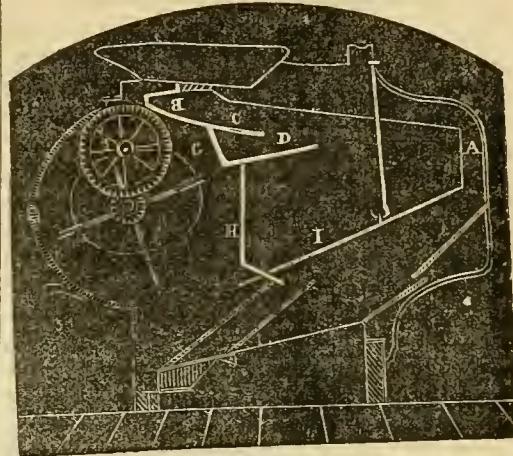
GEORGE PAGE & CO.

Shroeder street, between Baltimore and Fayette sts.,
Baltimore,

Manufacture to order, *Page's celebrated Portable Patent Circular Saw Mills*, with horse or steam power, of several sizes. They also manufacture Sawing and Planing Machines for railroad work, Threshing Machines, GRIST MILLS for farm purposes, Corn and Cob Crushers, Tenoning Machines, SEED AND CORN PLANTERS, IMPROVED HORSE POWERS, CORN SHELLERS, Augers for boring wells, augers for boring fence posts, water wheels, forcing pumps, &c.

They respectfully solicit a share of public patronage, and would be permitted to remark, that their Circular Saw Mills can do m work—aye, twice as much work as any other mill with the amount of power, and do it better.

(sept-6 m



MONTGOMERY'S UNRIVALLED IMPROVED ROCKAWAY SCREENER.

This celebrated FAN has been thoroughly tested and found to excel all others now in use for cleaning the different kinds of grain.

This improvement by Montgomery & Brother, consists in a double shoe—the larger shoe—A as commonly attached to winnowing machines, having grooves into which the screens, sieves or sieve boards are slid and rest.

B. The curved apron upon which the grain falls after passing through a hopper above.

C. The door which is made to extend across the curved apron B, and opening back on hinges towards the front end of shoe A, rests flat upon the front part of the apron B. The grain passes along the curved apron B and through the aperture of the door C and falls upon the screen D underneath. The apron is carried over the screen D on to the screen underneath, whilst the screenings pass through the screen D into the shoe G underneath, and are carried along the bottom of the shoe G to the centre, where a spout H receives the screenings and carries them down behind into a box below the bottom of the shoe A. The grain is carried back on to the grain board underneath perfectly screened.

The persons who have already used these GRAIN FANS have not only spoken in flattering terms of them, but prefer them to all others they have used—and very many of the best Agriculturists have given their certificates that the fact of these machines screening the grain twice by one and the same operation is the very improvement they have long desired. Our farmers will now have the most perfect winnowing machine, which spreads the grain over the upper screen more perfectly than any others now in use. This improvement is so valuable as to have induced the inventors and manufacturers to make application for Letters Patent.

All orders for the machines will be promptly attended to by the undersigned.

J. MONTGOMERY & BROTHER,
Lancaster city, Pa.

THE FRUIT-GROWER'S HAND-BOOK.

Encouraged by the very warm commendations of this work, received alike from experienced Horticulturists and from the wholly inexperienced, the author ventures with some confidence to submit it to the public at large.

Notes of all the important questions on fruit culture asked of the writer during the last ten years, with a thorough research of Pomological works, have contributed to render this volume as complete as possible, in convenient compass.

To the lot-holder who wishes to make the most of a few plants and little room, as well as to the extensive planter who wishes to arrange and cultivate his gardens in the most economical and profitable manner, the Hand Book will be found a useful companion for frequent reference.

Price, FIFTY CENTS. Two copies, post free, for \$1.
Address, WM. G. WARING,
sept. 1851. Balsburg, Centre co., Pa.

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The subscriber manufactures Double-acting Lift and Force Pumps, of all sizes, for
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VILLAGE AND FACTORY FIRE ENGINES.
Garden Engines, Cistern Pumps, Well Pumps, for any depth required, Hose Couplings, Copper Rivetted Hose of all sizes, Ornamental Cast-iron Fountains, &c.

Purchasers are respectfully invited to call.
Any communications by mail will have immediate attention.
G. B. FARNSWORTH, 34 Cliff st., near Fulton, N. Y.

FRUIT & ORNAMENTAL TREES, &c.

The subscribers solicit the attention of Nurserymen, Orchardists and Amateurs, to their present large and fine stock of Nursery Articles:

STANDARD FRUIT TREES, for Orchards; thrifty, well grown, and handsome, of all the best varieties.

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DAWAR PEAR TREES. Our collection consists of well known leading varieties, and numbers more than 150,000 saleable trees.—The superiority of these, being grown in the country, over imported trees is well known to every intelligent cultivator. Nothing, in fact, in this country, can equal our collection of Pear Trees.—They can be had from one to four years growth, some of which are now covered with fruit.

DAWAR APPLE TREES. We cultivate in large quantities the best and handsomest varieties of apples on Duncan and Pardise stocks for Dwarfs and Pyramids, and can furnish them in large quantities, from one to two years growth.

DAWAR CHERRY TREES. All the leading varieties are cultivated on Mahaleb stocks, extensively. We can furnish by the hundred and thousand, from one to two years growth.

CHERRY CURRANT, the largest variety known. Upwards of 1,000 plants on hand.

ENGLISH GOOSEBERRIES, all the best sorts.

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STRAWBERRIES, all the best sorts.

Ornamental Shade Trees, of good size, for streets, parks, &c., large and well grown.

Choice Trees and Shrubs, for lawns and pleasure grounds, including all the finest, new and rare articles recently introduced.

HARDY EVERGREEN TREES. Norway Spruce and Balsam Fir, of small size, in large quantities; and a moderate supply of large ones, besides nearly fifty new and rare Evergreens, including Deodar Cedar, Cedar of Lebanon, Chili Pine, Cryptomeria or Japan Cedar, Himalayan Spruce, &c., &c.

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PHLOXES. A collection of upwards of sixty varieties, including thirty new varieties imported last spring.

DAHLIAS. Upwards of 100 select varieties, including the finest English prize flowers of 1849 and 1850.

The following Catalogues, giving full information as regards terms, prices, &c., will be sent gratis to all who apply by post paid letters or at the office.

1st, a General Descriptive Catalogue.

2d, a Wholesale Catalogue.

3d, a Catalogue of Select Green House Plants.

4th, a Special Catalogue of Dahlias and Bedding Plants, for 1851.

ELLWANGER & BARRY,

Mount Hope and Garden & Nurseries,

Rochester, N. Y.

Sept. 1851.

THE MODEL ARCHITECT,

A series of original designs for Cottages, Villas, Suburban Residences, Country Churches, School-Houses, &c., &c., by Samuel Sloan, A.R.C.T.

The above work is designed to meet the wishes not only of those directly interested in building, but of all those who desire the advancement of this noble art in our country, and wish to cultivate their taste and acquaintance with architecture. The handsome manner in which it is prepared and embellished, renders it a tasteful ornament for the drawing room, while its accurate delineations give it the highest practical value.

The projector will find in it every variety of style and design, accompanied, as mentioned below, by all minutia necessary to construction. By its aid he may build without danger of making those ludicrous and expensive mistakes which so often occur.

The operative artisan of every grade will find the work of inestimable value. It is a complete book of reference, and all plates are drawn to a scale with the utmost accuracy, so that he has only to study them with his rule and compass.

The work, in two volumes of twelve numbers each, to be issued monthly, until complete. Each number contains four Lithograph Engravings of original designs, varying in cost of erection from \$800 to \$14,000. There are also four sheets of details accompanying the designs, comprising ground plans, &c., &c. Besides this, each number contains eight pages of letter-press, descriptive of the designs, giving extended accounts of the various styles adopted, essays on warming, ventilation, &c., &c., elaborate specifications, estimates, tables, and in short every thing desirable, either for construction or for general information, in beautiful type; the whole being executed on the very finest paper, manufactured expressly for the work. PRICE 50 CENTS A NUMBER.

Address, post-paid, E. S. JONES & CO., Publishers,

S. W. cor. 4th and Race sts., Phila., Pa.

Persons forwarding a list of five subscribers accompanied with the cash, shall receive a sixth copy gratis.

sept-1

FINE STRAWBERRY PLANTS.

Strawberry Plants of several varieties and fine quality can be had by the hundred or thousand at the low price of \$1 per hundred, by addressing with amount enclosed,

JAMES O'CONNOR,

Safe Harbor, Lancaster co., Pa.

All orders will receive prompt attention.

(sept. 1851.)

ANALYTICAL LABORATORY,

Yale College, New Haven, Connecticut.

JOHN P. NORTON, PROFESSOR OF SCIENTIFIC AGRICULTURE.

This Laboratory is now fully organised for instruction in all branches of analyses connected with the examination of soils, manures, minerals, ashes, animal and vegetable substances, &c.—Full courses are given in each of these departments, and also in general Chemistry, both organic and inorganic.

Students can thus fit themselves to become instructors in the various branches of Chemistry, or to apply so much of that and kindred sciences as may be necessary to the practical pursuit of agriculture or manufacturing. The demand for teachers and professors in the various branches of chemistry, especially agricultural, is now great and increasing, so that this is a fair field for those who have a taste for such pursuits.

A course of Lectures on Scientific Agriculture, by Professor Norton, commences in January of each year, and continues for two and a half months. This course is designed especially for the practical farmer, and has given great satisfaction to those who have attended it in previous years. It embraces a plain connected outline of the leading points in improved agriculture, treating in succession of the composition of the soil, the plant and the animal; of their connections with each other, and of all the improvements in cultivation, manuring, feeding, and fattening, which have been adopted in the best agricultural regions. This course is made so plain and practical, that the farmer who attends it can understand the whole, and apply it in his own experience.

More can be learned by attendance upon such lectures, by reading in connection with them, and by associating with others who are also desirous of obtaining a better knowledge of their profession than in years away from such advantages. The young farmer learns to think for himself, to see that a practice is not necessarily right because it is old, to understand the reasons for all that he does, and with this increase of knowledge is better able to make farming profitable as well as interesting.

Board and lodging may be procured at from \$2 to \$3 per week, and the Ticket for the Lectures is \$10.

In connection with the Lectures is a short Laboratory course, by means of which those who desire it, are taught to test soils, manures, marls, &c. in a simple way, and to make many elementary examinations of a highly useful character. The charge for this course is \$25.

To those students who go through the full Laboratory course, the charge is about \$200 per annum, and they can be admitted at any period of the year at a proportional charge.

For further information apply to Prof. JOHN P. NORTON, New-Haven, Conn.

(sept-4)

THE MAGNETIC LIGHTNING ROD.

THOS. ARMITAGE'S PATENT MAGNETIC LIGHTNING ROD.—The patented takes pleasure in informing his friends and

the public in general, that after many years' close investigation and numerous experiments, he has finally arrived at the true principle of manufacturing and putting up Lightning Rods and Points, and is now ready to serve his friends and the public in general, at the shortest notice, at his manufactory, VINE street, above 12th, Philadelphia, south side, where all persons are respectfully invited to call and examine for themselves, this being the only place where they can be purchased. This rod has been examined by the most scientific gentlemen now living, who have pronounced it to be the only safe Rod that has been put up or seen.

N. B.—Patent Rights are now offered for States, counties or districts in the United States, Philadelphia and Chester counties excepted.

Agencies can be formed by calling at the Factory, Vine street, above Twelfth, south side, Philadelphia.

sept. 1851

THOMAS ARMITAGE.

COTTAGE FURNITURE.

WARRICK & CO., are constantly manufacturing new and appropriate designs of enamelled, painted and Cottage Furniture, of warranted materials and workmanship. Suites of Chamber Furniture consisting of DRESSING BUREAU, BEDSTEAD, WASH-STAND, TOILET TABLE, and FOUR CANE SEAT CHAIRS, as low as \$30 per suit, and upward to \$100, gotten up in the most superb style.

Those who are about furnishing hotels, cottages, or city, residences, should call and see this style of furniture, which for cheapness, durability and elegance is far preferable to the old heavy kinds of mahogany, &c.

Orders from all parts of the country promptly attended to and carefully packed.

WARWICK & CO., Warerooms, No. 4 and 6, South Seventh st., between Chestnut & Market streets, Philadelphia.

sept-6

HENRY A. DREER'S
SEED AND HORTICULTURAL WAREHOUSE,

No. 59, Chesnut st., near 3d, Philadelphia.

Constantly on hand a large and well selected assortment of Garden, Field, Grass and Garden Seeds, Fruit Trees, Grape Vines,

Roses, &c.

Horticultural Implements in great variety.

Catalogues forwarded on post paid application.

(sept-4)

AGENCY
for the purchase and sale of improved breed of
Animals.

STOCK Cattle of all the different breeds, sheep, swine, poultry, &c., purchased to order, and carefully shipped to any part of the United States, for which a moderate commission will be charged. The following are now on the list, and for sale, viz:

Thoroughbred Short Horns and Grade Cattle.

do	do	Aldernay	do	do
do	do	Ayrshire	do	do
do	do	Devons	do	do
do	do	South Down Sheep.	do	do
do	do	Oxfordshire	do	do
do	do	Leicester	do	do

Swine and Poultry of different breeds. All letters post paid will be promptly attended to. Address AARON CLEMENT, Cedar st., above 9th. Phila. August 1, 1851.

JOURNAL OF THE FRANKLIN INSTITUTE,
of the State of Pennsylvania, for the promotion of the
Mechanic Arts.

THE oldest Mechanical Periodical extant in America, is published on the first of each month in the City of Philadelphia. It has been regularly issued for upwards of twenty-five years, and is carefully edited by a committee of scientific gentlemen appointed for the purpose, by the Franklin Institute.

The deservedly high reputation, both at home and abroad, which this Journal has acquired and sustained, has given it a circulation and exchange list of the best character, which enables the Committee on Publications to make the best selections from Foreign Journals, and to give circulation to original communications on mechanical and scientific subjects, and notices of new inventions; notices of all the Patents issued at the Patent Office, Washington City, are published in the Journal, together with a large amount of information on Mechanics, Chemistry, and Civil Engineering, derived from the latest and best authorities.

This Journal is published on the first of each month, each number containing at least seventy-two pages, and forms two volumes annually of about 432 pages each, illustrated with engravings on copper and on wood of those subjects which require them.

The subscription price is Five Dollars per annum, payable on the completion of the sixth number; and it will be forwarded free of postage when five dollars are remitted to the Actuary (postage paid) in advance for one year's subscription.

Communications and letters on business must be directed to "the Actuary of the Franklin Institute, Philadelphia, Pennsylvania," postage paid. WM. HAMILTON, Actuary, F. I.

August 1, 1851.

TO FARMERS, PLANTERS,

MARKET GARDENERS & OTHERS. PREPARED OR ARTIFICIAL GUANO—Manufactured only by KENTISH & CO.

Depot No. 40, Peck Slip, New York.

THIS manure is so combined, that the Ammonia and other fertilizing gases are absorbed, fixed, and are given out to vegetation only as it requires them. No rot, mildew, worm, fly or other insect can approach it; an important consideration to farmers generally, but particularly in potato planting. It will be admirably adapted to the renovation, restoration and fertilizing of such lands as have been worn out.

It may be used broadcast, after the ground is ploughed, and then harrowed in with the seed. It is also valuable as a top dressing, Six acres per day can be thus manured in a day by one man.

It may be used with the greatest advantage on Corn, Potatoes, Wheat, Tobacco, Garden Vegetables, Rye, Oats, Green House Plants, Flowers, Vines, Wall Fruit, &c., and more than thousands certificates from the most celebrated Farmers and Gardeners, can be shown, all testifying in the highest terms to its great value as a fertilizer. A pamphlet containing these certificates can be had, by applying to the manufacturers. THE PRICE IS ONLY ONE CENT PER POUND. It is put up in tbsls. averaging 235 lbs., or in casks, from 1000, to 1400 lbs.

TERMS. Cash, or approved credit on delivery. Persons wishing to buy the article to sell again will be allowed a liberal commission. Address KENTISH & CO.

Aug. 1, 1851.

No. 40, Peck Slip, New York.

GUANO AND PLASTER.

THE subscribers offer for sale at the lowest market rates,

1000 Tons Dry Patagonia Guano,
500 " Government Peruvian Guano,
500 bbls. Ground Plaster.

The quality of the above is unsurpassed, and can be recommended with confidence to farmers and others in want of the articles. A liberal deduction made to Country Merchants.

ALLEN & NEEDLES.

No. 22 & 23, S. Wharves, First Store above Ches. st., Phila.
July 1.

.74m.

BERKSHIRE PIGS and South Down Sheep of Pure Blood, for
sale by JAS. THORNTON, Jr.,
July 1-6m. Byberry, Philadelphia Co.

STRAWBERRY PLANTS.

THE subscriber offers for sale 4000 young and thrifty Strawberry plants at low prices. This and the following month being the proper time to form new beds to bear fruit the following year.

J. F. HEINTZ.

Aug. 1, 1851.

No. 18, East King st., North side, Lan.

GUANO WARE HOUSE,

No. 54, South Wharves, Below Walnut Street.

PERUVIAN and Patagonia Guano, for sale in large or small quantities, in barrels and bags, on reasonable terms.

JOSEPH L. JONES,

No. 54, South Wharves, Philadelphia.

Analysis Phosphate of Magnesia 45.4

Carbonate of Magnesia 1.7

Alkaline Salts 0.6

Organic Matter 26.6

Ammonia 2.8

Water 16.4

Sand &c. 6.2

" The 45.4 parts of Phosphate of Magnesia contains 28.75 parts of Phosphoric Acid. The guano is of excellent quality, containing nearly one half of matter of the highest value in Agriculture, besides one fourth of organic matter in a good state for application to the soil."

Result of an analysis of a lot of Patagonia Guano in store, and for sale by

JOS. L. JONES,

No. 51, South Wharves, Phila.

GUANO,

PERUVIAN and Patagonia Guano for sale in lots to suit purchasers, by

J. CASSEY & SON,

No. 121, South Water st., a few doors above Dock st., Phila.

July 1.

TO FARMERS ?
LANPHEAR & JEFFERIES.

RESPECTFULLY invite the attention of Farmers and others to their Establishment for the manufacture of Farming Implements and especially to their celebrated

IMPROVED GRAIN FANS,

which they confidently assert will do more work in a shorter space of time, and with less labor, than any other Fan now in use. These Fans, wherever introduced, have given complete satisfaction, and a large number of testimonials could be procured, testifying to their superior merits.

They also manufacture, to order, Agricultural Implements of various kinds: such as Straw Cutters, Cultivators, Ploughs, Harrows, &c.

Having had many years' experience in the best shops in the country, they are prepared to do work of a superior quality a little cheaper than any other establishment in the State. They will warrant all their work to be what it is represented. A warrant given with every Grain Fan, giving the purchaser the privilege of returning it, should it not do good and quick work.

They will deliver them, free of expense, any distance within fifty miles of the manufactory. Their Shop is at the junction of the Marietta and Columbia Turnpike, Lancaster, Pa., where they will be happy to have Farmers call and examine for themselves. Price of Fans, No. 1, large size, \$24.00

" " " 2, small size, \$22.00

Several good and responsible Agents wanted in the Western and Middle part of Pennsylvania, to whom a fair percentage will be allowed. All orders addressed to Lanphier and Jeffries, Lancaster Pa., will meet with prompt attention.

June 1-1f.

Seed and Agricultural Warehouse,

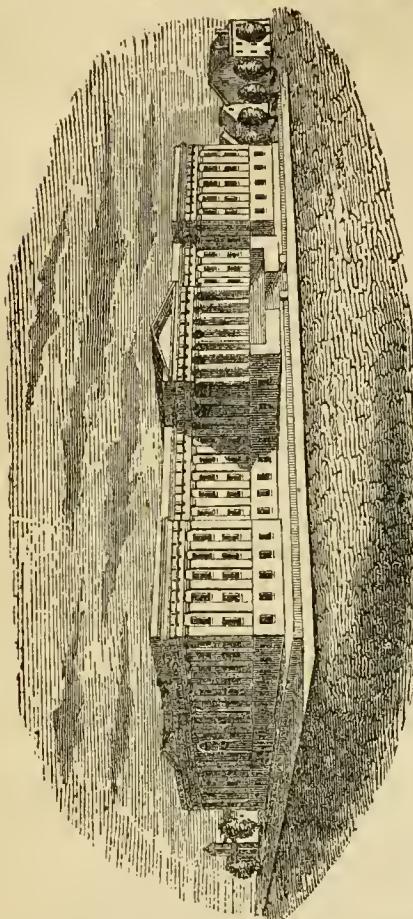
19 1/2 Market Street, Philadelphia.

WE offer to our friends and customers, the largest assortment of Agricultural implements, Garden tools, and Seeds, ever offered in this Market, consisting in part of the following, viz:—Prouty and Mear's Patent highest premium self-sharpening Ploughs, right and left handed side hill Subsoil, of various sizes, of superior materials and workmanship, warranted to give satisfaction, or the money returned—Four highest premiums awarded to these Ploughs at the New York Fair, 1850. Also, Beach and Car Share Ploughs; Spain's improved Barrel Churn, constructed in such a manner that the dasher may be removed from the inside of the Churn by simply unscrewing the handle from the dasher. Hay, Straw and Corn-stack cutters, in great variety, among which may be found Hovey's superior premium straw-cutter, of every size.

Also, Horse-power Threshing Machines, Fan Mills, Corn Shellers, Cheese Presses, Seed Planters, Dirt Scrapers, Sugar Mills, Ox Yokes and Bows, Turnip Drills, Horse Rakes, Swathe Scythes, Concaved Hoes, Spring Tempered Cast Steel, Oval and Square Manure and Hay Forks, Pruning Shears and Chisels, Beach and Bar Share, repairing pieces and castings, Peruvian, Patagonia and prepared Guano, together with a complete assortment of grass, garden and field seeds, all of which will be sold at the lowest possible prices, at 19 1/2 Market street, Philadelphia.

April 9—tf

PROUTY & BARRETT.



PATENT OFFICE.

PENNA. PATENT AGENCY OFFICE.

Inventors and others, having business to transact at the United States Patent office, are hereby informed, that the undersigned will attend promptly to all business connected with said office, and will complete Perspective and Sectional Drawings, and all requisite papers, Caveats, Specifications, Disclaimers, Assignments, &c. and make the proper applications for the securing of Letters Patent, according to law.

MACHINISTS AND INVENTORS

will save time, trouble and expense, by first consulting him, and the strictest secrecy will be observed, relative to their inventions and claims.

The office is at present located in Centre Square, two doors south of the Lancaster Bank, where the list of patents granted since the year 1790 to the present day can be examined, together with numerous specifications, drawings and models, and every information obtained relative to the laws and rules of the U. S. Patent office.

All the requisite papers, drawings and models will be promptly and carefully forwarded to Washington city, free of charge by

J. FRANKLIN REIGART, Lancaster, Pa.

Life Insurance for Horses, &c.

THE American Live Stock Insurance Company, (Stockholders individually liable) for the Insurance of Horses, Mules, Prize Bulls, Sheep, Cattle, &c. against Fire, Water, Accidents and Disease. Also, upon Stock driven to Eastern markets, or transported South.

JOHN H. FRICK.

General Agent for Pennsylvania, Philadelphia.

REFERENCES:

Wood, Abbott & Co.,
Trout, Brother & Co.,
Coates & Brown,

Agents:

JOHN ZIMMERMAN, Lancaster Pa.

CHARLES F. FRICK, Reading, Pa.

SAMUEL H. TAYLOR, Manch Chunk, Pa.

Dr. JOHN G. SCOVEN, Veterinary Surgeon,

Examiner for Lancaster County.

MAY, 1851.)

W. M. B. WILEY, Job Printer, Lancaster, Pa.

Kettlewell & Davison's Salts against Guano.

A CHALLENGE!!!

THE deep interest now taken by Agriculturists in all descriptions of manure, would seem to justify any expedient, by which fair and unprejudiced experiments may be made of the various descriptions of manure at this time attracting the attention of the public. In view of this, and the undersigned honestly believing that the Chemical Compound, manufactured by them, is the best manure of which any knowledge is had for a *Corn Crop*; challenges Guano to the test upon the following condition:—He will forfeit *One Hundred Dollars*, to be presented to the Maryland Agricultural Society, if any advocate of Guano will do the same, that the Renovator compounded by Kettlewell & Davison, will produce upon any soil, the largest crop of *weighed* corn, without regard to the size of the stalk, provided the President of the State Agricultural Society will select some person, in his judgment qualified, to superintend the experiment. The nature of the soil to be described, so that each party can direct the mode of application; two barrels of the Salts to be used per acre, costing \$6, and 300 lbs. of the Guano, costing \$7.20, the party making the experiment to receive the manure free of cost. And the same amount against any manure as a top dressing upon timothy or clover.

JOHN KETTLEWELL.

Kettlewell & Davison again call the attention of Agriculturists to their various Chemical Manures—and in so doing, they would be insensible to common gratitude, if they failed to express their profound acknowledgments for the constant and increasing demand, which flows in upon them for their simple and compound manures. Each season has greatly increased their sales, extending so far south as South Carolina.

They can give no stronger evidence of their faith in the virtues of their manure, as the best known for a *corn crop*, than the tenders they make above; and the certificates which they herewith present. In the offer of a test, it is not the amount involved, but the willingness to challenge result, that speaks their integrity and confidence. We could add any amount to the testimony we publish; but if the names we refer to, do not command confidence, no additional number could. We have never boasted of the quality of our article, we have been content to leave a decision to time, demand and experiment, that has been in our favor—hoping, if we have less of "Bi-phosphates," the public would discover it, as they would if it was found we had more of "sand" than any thing else.

KETTLEWELL & DAVISON.

Office at Ober & McConkey's, corner of Lombard and Hanover Streets. Factory, Federal Hill.

BI-PHOSPHATES.

We keep constantly on hand this valuable manure. Bones, with a proper portion of the Sulphate of Ammonia, dissolved in Sulphuric Acid. The Chemists of this country and Europe have been pressing this mode of using bone-dust upon the attention of farmers, with great zeal and ability of recent years. Every experiment has confirmed the truthfulness of their theory; and we hazard but little in saying that in a very brief time it will be used in no other way. It is prepared so as to be sown similar to the salts, at the rate of one or two barrels to the acre.—The price of this article is \$4 per barrel. Let the farmer who doubts, try it at a less expense than the old mode of using bone-dust.

TOBACCO GENERATOR.

■ This is a chemical compound, made expressly for the growth of the Tobacco plant. We will call more special attention to it at the proper season.

CHEMICAL RESIDUUMS.

We have constantly on hand Chemical Residuum of every description. Full information of which can be had by application to us.

COMBINATION OF GROUND PLASTER AND POTASH.

This is a preparation made for soil deficient in Potash, of which deficiency there is, unfortunately, too many instances in much of our Maryland land. For this compound we are indebted to the suggestion of an accomplished Agriculturist of Prince George's county, who may at some future day present the result of his experiment. The price of this is \$2.50 per barrel.

DIRECTIONS.

The mode of using the Renovator is simple, inexpensive, and requiring but little labor. The farmer must bear in mind, that in the preparation of his soil he bears an equal responsibility in testing the merits of any manure. Land negligently or badly cultivated gives no manure a fair chance. How to put land in order he ought to know better than we can teach him; and if he don't know, should learn as speedily as possible. The land, then, in order—if one barrel to the acre is used—and this quantity depends upon the quality of the land—it should, for grain be sown broad cast, and slightly harrowed in.

If two barrels are used, one as stated above, and the other as a top-dressing upon the wheat or rye, early in the spring at the commencement of the first thaw. Upon grass it should be sown broad-cast upon the timothy or clover. On corn, either broad-cast or in the hill. Where two barrels are used, one each way.

■■■ PRICE of the RENOVATOR, \$20 PER TON, or \$3 PER BARREL.

April—11

HENRY L. TRIPPLER,
(Successor to Joseph P. H. Coates.)
Dealer in Grass and Garden Seeds.
No. 49, Market Street, Philadelphia.

**Chester County Agricultural
WAREHOUSE & SEED STORE,
High Street, near the Horticultural Hall,
WESTCHESTER, PA.**

THE subscribers in connection with their extensive Nursey Garden, and Green House establishments, have erected a large Warehouse, and will keep constantly on hand and for sale, a complete assortment of *Agricultural and Horticultural Implements*, consisting, in part of Hoses Powers and Threshers, Plows of different sizes and patterns, among which are the celebrated "Eagle Self-sharpening," Prouty & Mearns' Centre Draft, Subao, Sidehill, &c., &c., Harrows, Cultivators, Wheat Drills, Seed Sowers, Corn planters, Fanning Mills, Corn shellers, Straw and Hay Cutters, Churns of various sizes and patterns, Harvesting tools of every description; in a word, every implement necessary to the Farmer and Gardener, and of the most approved kinds and patterns can be had at our Warehouse. Also, field, grass, and garden seeds of every variety.

At our Nursery will be found our usual large assortment of Fruit and Ornamental Trees, Shrubbery, Grapevines, Green House Plants, &c., &c.

PASCHALL MORRIS & CO.

Westchester, Pa., June 1, 1851.

**DIXON & KERR'S
POULTRY BOOK.**

JUST PUBLISHED,

A TREATISE ON THE HISTORY AND MANAGEMENT OF ORNAMENTAL AND DOMESTIC POULTRY. By Rev. Edmund Saul Dixon, A. M., with large additions, by J. J. Kerr, M. D. Illustrated with SIXTY-FIVE portraits, from nature, engraved expressly for this work.

CONTENTS.

- The Domestic Fowl.
- The Rearing and Management of Fowls.
- Eggs—Their Color, Form and Sex.
- Eggs—Their Preservation for Culinary Purposes.
- Eggs—Their Preservation for Incubation.
- Varieties of the Shanghae Fowl.
- The Cochin China Fowl.
- Burnham's Importation of Cochin China Fowls.
- The Malay Fowls, sometimes (though erroneously) called Chittagong.
- The Pheasant—Malay Fowl.
- The Guelderland Fowl.
- The Dorking Fowl—Colored Dorkings.
- The Spanish Fowl.
- The Game Fowl—The Mexican Hen Cock Game Fowl.
- The Chittagongs, The Jays, The Shakebag, and the Jersey Blue Fowls.
- The Poland or Polish Fowl.
- The Spangled Hamburgs—The Bolton Greys or Creole Fowls.
- The Rumpless Fowl, the Silky and Negro Fowls.
- the Frizzled or Friesland Fowl, the Cuckoo Fowl, the Blue Dun Fowl, and the Lark-crested Fowl.
- The Smooth-legged Bantam.
- The Dung-hill Fowl, the Dominique Fowl, Colonel Jacques' Chicken Coop, Devereux's Method of Rearing Chickens without a Mother, and Cope's Letter on Early Chickens.
- Caponizing Fowls.
- The Pea Fowl.
- The Ring-necked Pheasant.
- The Turkey.
- The Guinea Fowl.
- The Mute Swan (*Cygnus Olor*).
- The Wild or Canada Goose.
- The Domestic Goose.
- The Hong Kong or China Goose.
- The Bremen Goose.
- The White-fronted or Laughing Goose.
- The White China Goose.
- The Bernicle Goose—The Brent Goose.
- The Tame Duck.

This work is well bound in muslin, and is printed on the finest paper. The illustrations are engraved in the most elegant manner, from original and accurate drawings, and the whole is one volume of 480 pages duodecimo, price \$1. A few copies have been colored after nature. Price for the colored copies, \$2.50. For sale by all Booksellers, and by the Publishers. E. H. BUTLER & CO.,

June 1-31

23 MINOR Street Philada.

PHILADELPHIA & LIVERPOOL LINE OF PACKETS—To sail from Philadelphia on the 15th, and from Liverpool on the 1st of each month.

From Phila. From Liverpool.

Ship SHENANDOAH	April 15th	June 1st
Capt. W. P. Gardiner.	Aug. 15th	Oct. 1st
	Dec. 15th	Feb. 1st
New ship WESTMORELAND	May, 15th	July 1st
Capt. P. A. Decan,	Sept. 15th	Nov. 1st
	Jan. 15th	Mar. 1st
New ship SHACKMAXON,	June 15th	Aug. 1st
Capt. W. H. West.	Oct. 15th	Dec. 1st
	Feb. 15th	April 1st
Ship MARY PLEASANTS,	July 15th	Sept. 1st
Capt. R. R. Decan,	Nov. 15th	Jan. 1st
	March 15th	May 1st

The above first class ships are built of the best materials, and commanded by experienced navigators. Due regard has been paid to select models for speed with comfort for passengers. They will sail punctually on the days advertised, taking advantage of the steam tow boats on the Delaware.

Persons wishing to engage passage for their friends, can obtain certificates, which will be good for twelve months.

Passage to Liverpool in the cabin,	\$80
" " Forward cabin,	20
" " Steerage,	12
Passage from Liverpool in the cabin,	100
" " Forward cabin,	25
" " Steerage,	20

Those who wish to remit money, can be accommodated with drafts for £1 sterling and upwards, at sight, without discount. Apply to GEO. McHENRY & CO.

June 1, 1851. 37 Walnut street.

JOHN H. SMITH'S

RENOVATING OINTMENT & HORSE RENOVAG' POWDERS.

THE author of our existence has caused to grow up spontaneously, throughout the world, such vegetable properties as will at once cure, when properly applied, all curable diseases. The proprietor of these truly valuable Medicines might fill a volume, with Certificates and Testimonials in favor of his articles; but considering such puffs wholly useless, since they are so readily manufactured, and made use of to such an extent to palm off some useless trash upon the public, I shall, therefore, state at once, the various diseases that can be speedily cured by these invaluable Horse Renovating Powders, viz.—Glanders, Hidebound, and Horse, Distemper. It also carries off all gross humors, and purifies the blood. It is also a safe and certain cure for the Heaves; it will also cleanse, at once, the stomach and maw from bots, worms, &c. and again restore the stomach and bowels to healthy action.

SMITH'S RENOVATING OINTMENT is an invaluable remedy for horses, in the cure of the following diseases: Fresh Wounds, Galls of all kinds, Sprains, Bruises, Ringbones, Poll Evil, Wind Galls, Spavins, Sweeny, Fistula, Strains, Lameness, Founder'd Feet, Cracks, and Scratches.

The above articles are to be had in most of the Cities and principal Villages throughout the United States, and the Canadas.

For sale, wholesale and retail, at John H. Smith's Depot, No. 123 Fulton street, (2d floor.) New York.

Price, 25 cents per box for the Ointment; 50 cents for the Horse Renovating Powders. For sale by DR. ELY PARRY, April—6m] East King street, Lancaster, Pa.

The BEST and MOST VALUABLE

Agricultural Implements & Machinery

Exhibited at the State Fair in 1850, will be seen by the award of Premiums below:

AWARDED TO E. WHITMAN, JR.,

55 Light Street, Baltimore, by the Maryland State Agricultural Society,

At their 3d Annual Fair, held in Baltimore 23d, 24th and 25th October, 1850.

For the best Plow in the Plowing Match, the Frony & Mears No. 5½	\$40.00
For the best Plowing with Ox Team, same plow, (Special Premium)	2.00
For the best Plow on Exhibition, Rnggles, Nourse, Mason & Co's No. 3, 1st Premium,	8.00
For the best Railway Horse-power, Whitman's Improved, 1st Premium,	15.00
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C. B. ROGERS.

VOL. 1.

LANCASTER, PA., OCTOBER, 1851.

NO. 7.

THE FARM JOURNAL.

S. S. HALDEMAN, Editor.

To Correspondents.

Wm. HARTLEY, *Bedford*. The specimens sent by mail include three distinct species. The larva is the meal-worm which produces an insect named *Tenebrio molitor*, which is often found in mills, and is one of the species destructive to flour. The smallest brown specimen among the weevils, about an eighth of an inch long, is not a weevil, but the *Silvanus surinamensis*, which attacks grain. It is readily distinguished by a row of six spines on each side of the thorax, as represented in the agricultural part of the *Patent office Report* for 1849, pl. 2, fig. 24.

The remaining specimens are true weevils, and seem to be *Stethophilus granarius*, which is widely spread in Europe, and occurs also in Java. It is figured in the before mentioned volume, pl. 2, fig. 21, and described in nearly a hundred different works.—Schoenherr's description is but four lines long, and not sufficient for the identification of the species, and we have not time to make further comparisons the present month. In the mean time we enumerate some of the modes of counteracting its ravages.

Kiln drying the wheat destroys the insect, larvae and eggs. Mr. Wilkinson had a large chamber capable of holding eight hundred bags of wheat at a time, which was heated by means of hot water pipes to 135 degrees Fahrenheit, a heat sufficient to kill the insect, without preventing the grain from germinating.

Weevils do not like to be disturbed, and may therefore be driven from heaps of wheat by frequent shoveling, or passing it through a fan or smut machine. If at the same time small heaps of wheat are left undisturbed for some time, many will be attracted by them, and destroyed by scalding or other application of heat.

As the grain is generally attacked a few inches below the surface of the heap, sprinklings of turpentine, or bottles of it, (uncorked, but covered with

gauze,) if sunk in the heaps, might cause them to leave, as this substance is obnoxious to most insects.

The French recommend unscoured wool to be laid upon infected wheat, as they are said to enter it and die there.

A. L. H. The insect which destroys the stalk of the Antwerp raspberry is the *Agrilus ruficollis*, of which we gave an account (accompanied by a figure) in the Quarterly Journal of Science and Agriculture in 1846.

The Agricultural Fair.

Extensive preparations are making to render this an exhibition of much interest, and we learn that various matters are in preparation of an instructive and pleasing nature which will well repay a visit, even from the adjoining States. The New York exhibitions have become so popular that they attract a crowd of 100,000 persons, and there is no reason why our own should not be of equal interest.

We hope that the suggestion of the Hon. A. O. Hester, (see page 107) will be acted upon, and a strong petition be sent in to the next Legislature in favor of one or more agricultural colleges, which we regard as the chief means not only of advancing agriculture, but of elevating the general standard of academical and collegiate education amongst us. Our own views may be learned to some extent from our notice of Mr. Russell's plan on page 59, and if we have admitted articles containing different ideas, it was that both sides might be heard. We expect to return to this subject in a future number.

THE POTATO BLIGHT.—The potato crop in New York State is suffering from the blight. Accounts of disease have already been received from nine counties, viz: Madison, Ontario, Erie, Livingston, Genesee, Wyoming, Onondago, Oswego and Cortland.—In the three latter, the *Syracuse Journal* says, the rot is extensive, and the farmers are generally digging and sending to market.

Manure, &c.

Plowing down green corn as a manure—Grasshoppers—Drought in Bucks county.

MR. EDITOR:—Yours of the 10th inst., reminding me of my promise to communicate something for your valuable journal after harvest, I received by due course of mail. What I had reference to in my article last spring, was principally the result of the ten acres of "green corn" I had plowed down for wheat; and in fulfillment of that promise, I now state that the result is quite as good as that of last year, the yield being at least thirty bushels to the acre, the same as the remainder of the fifty acres seeded in the usual way. I am now satisfied, that where ground is in *good heart and heavily limed*, two bushels of corn to the acre, sowed broadcast about the 15th of June, left to grow until well out in tassel, and then *thoroughly* plowed under, will produce the same beneficial result as the usual amount of manure upon the same ground. This remark not only applies to the wheat crop, but to the grass afterwards.

Believing that I have this year manure sufficient for all purposes, and having no field that I could conveniently spare, I did not sow any corn broadcast.—I am now sorry that I did not do so, for if I had not used it for plowing under, it would have answered a valuable purpose for feeding my cattle this dry season. I shall not willingly let any year again pass without pursuing my favorite plan.

This has been a very dry season in this portion of Bucks county, and the result will be light crops of corn and potatoes. The early part of the spring was cold and wet, and farmers were backward in getting in their corn, and in many cases when got in, the ground was too wet. I have about forty acres in corn, nearly all heavily manured; but the result will be little more than one-half of what I anticipated, though my corn looks quite as well as that of my neighbors. About twenty-five acres of the above is meadow land. This portion was plowed late last fall about ten inches deep, and the manure turned under at the time. In the spring, so wet was the ground, that notwithstanding all my expense at draining, I was compelled to open large ditches to convey away the standing water, before I could enter upon it for cultivation. When it became sufficiently dry, I plowed the whole again about five inches deep, harrowed and rolled it, and planted the corn about the middle of May. The season soon after became dry, the corn grew badly, and for a while I thought it would come to nothing. A few genial showers, however, gave it a start; and I think I may safely say the yield will be at least fifty bushels to the acre, while the upland equally well manured and better cultivated, will not produce half that amount. As I passed through Lancaster county the latter part of June, I could not but contrast the appearance of the corn there growing, with that of Bucks. While that in your county was

three and four feet high, much of ours was little more than a foot above the ground. Indeed, in some cases in this county the corn was not planted until early in June. The present month, thus far, has been unusually warm, and we have had several refreshing rains which will help on the late corn, if not overtaken too soon with frost.

In addition to the drought of the season we have been visited in many sections of our county with myriads of *Grasshoppers*. The destruction caused by them was almost equal to that of the "*Locusts of Egypt*." Where the drought had not destroyed the pastures entirely, the balance was eaten by the grasshoppers, and this to such an extent that many of the fields looked as if they had been *burned*. After destroying the pastures, they attacked the fields of buckwheat and corn. They eat up, for me, two acres of buckwheat, and parts of my corn fields look as if a hail storm had passed through them. After cutting the tender part of the blade, they likewise eat up the silk and upper part of the ear, and in some cases cut holes in the husk and destroy the grain on one side of the ear. About sunset you might find the fences and bodies of trees covered with them—their nightly resort for repose. About ten days since they commenced leaving us, many going off in clouds in a southerly direction. We have now but few remaining. I should like to know whether the grasshopper of the present year is the same as those we annually meet with, for the destruction caused by them appears unprecedented. Probahly your intelligent Philadelphia correspondent, who has given much attention to insects, would enlighten your readers upon this subject.

To give you a proper idea of what some farmers have suffered from the two causes above referred to, I may here remark, that during the early part of the season, I hauled out my barn-yard manure and spread it upon a twenty-five acre field, well set with clover, intending to make open fallow for wheat. But so completely have my pastures been ruined, I was compelled to keep this field for my cattle, and to cut off a patch of corn fodder and feed to them in addition thereto. The top-dressing of manure kept the ground moist, and for several weeks this field was my main dependence for pasture for forty head of cattle. For some reason there were but few grasshoppers in this field. The clover in my oat stubble failed, and I am now plowing it up for wheat without manuring, to take the place of the field retained for pasture. You need not, therefore, next year expect to hear of any large crop of wheat on my farm.

WILLIAM STAVELY.

*Partridge Hall Farm,
Bucks co., Sept. 15, 1851.*

How often do men mistake the love of their own opinions for the love of truth.

Communications.

TRANSLATED FOR THE FARM JOURNAL.

Agricultural Chemistry.
No. 2.

Having thus shown the importance and direct influence of chemistry in agriculture, we shall proceed to present a concise view of agricultural chemistry itself.

Vegetable bodies in general consist of two classes of substances, of which the one is termed the *organic* or combustible, and the other the *inorganic* or incombustible elements of plants. Of these constituent parts, the organic are in all vegetables the more abundant in quantity—composing from 90 to 99 per cent. of their entire weight. The organic portion, again, comprises various elements. By the term *elements*, or fundamental substances (sometimes also called original or simple substances,) we understand those bodies which are regarded as simple, because hitherto, science has not succeeded in decompounding them—though it seems probable that the decomposition of many of the substances now called simple, will yet be effected. The present number of such elements, or simple substances, is fifty-eight. Of these four are *aeriform* or gaseous, two are semi-liquid, fifty-one are solid, and one has not yet been reduced to its true form. The organic portion of vegetables consists of the four following elements—oxygen, nitrogen, hydrogen and carbon; though all of these are not present in all plants.

The most important of these elementary substances is *oxygen*—sometimes called vital air. This is a peculiar kind of gas, contained in the atmosphere and in water, and having a tendency to unite and combine with almost every other substance, whether solid or fluid, and thus assuming a variety of forms.—From this disposition to combine with other substances, results its property of conditioning and supporting combustion; because during the process of combustion, it unites with the component elements of the burning substance. Oxygen also is that peculiar kind of air, or portion of the atmosphere, which is taken up by the bodies of animated creatures in the act of breathing. Oxygen unites with all the metals, forming various grades of combination, which are termed oxids, protoxids, peroxids, &c. Oxygen performs a highly important part in vegetable economy, being absorbed by the plants and converted into food or pabulum. Oxygen constitutes nine parts in ten of common water; one in five of the atmosphere; and about one-third of the crust of the earth.

For the production of oxygen, chlorate of potash is most usually employed. One-tenth part of pure oxid of manganese is mixed with a convenient portion of chlorate of potash, in a small glass flask or tubeless retort, to which a bent glass tube is fitted by a cork. The tube serves to conduct the gas beneath

the water in the pneumatic trough (*fig. 1.*) into the

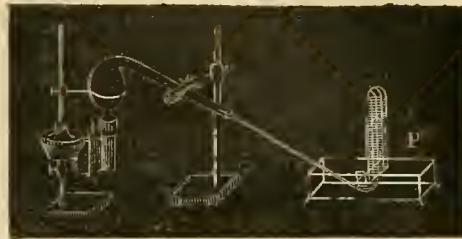


Fig. 1.

inverted receiver, which is filled with water. The flask or retort is then cautiously heated by means of a spirit lamp (*fig. 2.*). When the heat has expelled

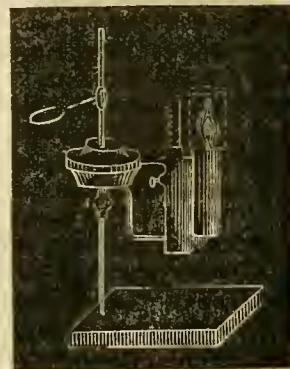


Fig. 2.

the atmospheric air from the retort, and the oxygen begins to be developed as the salt becomes decomposed, the pure gas is freely given off, passes through the bent tube, and displaces the water in the receiver in which it is collected for preservation. For the production of very pure oxygen, oxid of mercury may be employed. The arrangement of the apparatus, for this purpose, is shown by *fig. 3.* The oxid of mercury is placed

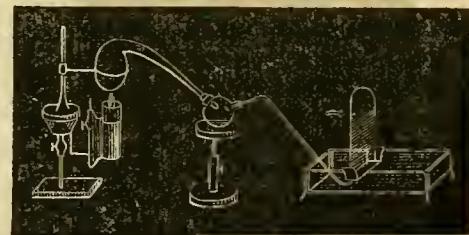


Fig. 3.

in a small glass retort or flask, which is connected by a glass tube with a reservoir having two openings, from which another glass tube conducts the gas to the inverted receiver in the pneumatic trough. At a dull red heat the oxid of mercury becomes decomposed into its elements, mercury and oxygen, both of which pass off in a gaseous state. The mercury condenses in the interposed reservoir, while the oxygen passes on and is received in the air-jar.

Nitrogen is a gas differing very essentially from oxygen. In pure nitrogen, animal life is instanta-

neously extinguished, and it will scarcely combine with any other substance. Atmospheric air consists principally of nitrogen; it forms four-fifths of the air we breathe, but mixed with oxygen, whereby its power and effects are modified. Nitrogen is a principal constituent of both vegetable and animal bodies; but as it cannot be inhaled in its purity, it is introduced therein by various processes, as will be seen hereafter. Nitrogen is specifically somewhat lighter than atmospheric air, from which it may readily be obtained, by placing on a piece of cork floating on the water in the pneumatic trough, a small porcelain cup containing a little cotton moistened with alcohol (fig. 4.) On setting the cotton a fire and inverting over



Fig. 4.

it and the containing cup, a glass jar or receiver with its edges immersed in the water, the oxygen of the air will be consumed and during the combustion, the volume of air will be diminished whilst the water will rise in the jar and occupy about one-third of it. When all the oxygen has thus been consumed, what remains in the jar is nitrogen. Purer nitrogen, however is procured by conducting chlorine gas through a solution of ammonia in water. The apparatus shown by fig. 5, is used for this purpose. Chlorine



Fig. 5.

gas is evolved in the flask, from a mixture of two parts hydrochloric or muriatic acid and one part powdered peroxid of manganese, by the application of heat, and is conducted through a bent glass tube into a glass jar or reservoir containing the aqueous solution of ammonia. The resulting nitrogen passes off through another glass tube provided for it, and is collected in a suitable receiver in the pneumatic trough. It is a fixed gas which has not hitherto been reduced to a liquid form by pressure, on the application of artificial cold. It is specifically lighter than air, and is not chemically combined with the oxygen of the atmosphere.

Hydrogen is a gaseous element, capable of combin-

ing very intimately with oxygen, in which state it is no longer aiform, but constitutes water. Hydrogen possesses the property of uniting chemically with oxygen. It is much lighter than common air, and rises up in it. It is readily procured by the decomposition of water (which contains it in the greatest abundance,) by means of the galvanic pyle. This is effected by acidulating water with a few drops of sulphuric acid, and introducing it into the funnel of the apparatus, fig. 6. If now, the two wires be connected with

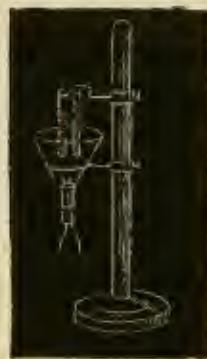


Fig. 6.

the two poles of the battery, the water will be separated into its elements—forming two volumes of hydrogen and one volume of oxygen. The most simple apparatus for the production of hydrogen is represented in fig. 7. A quantity of iron or zinc, in small



Fig. 7.

pieces or fragments, is put into the flask, which is then closed tight by a cork through which is inserted a funnel-topped glass-tube for the introduction of sulphuric acid, and another straight tube for the escape of the gas evolved. The diluted acid is poured in through the funnel, and the gas is conveyed by the other tube to the receiver standing in the pneumatic trough. Numerous bubbles are immediately evolved, on the introduction of the acid. After the process has continued a few minutes, a small quantity of gas is passed into a vial to test its quality by combustion. If it burn steadily, without explosion, the gas is pure.

Carbon is a solid combustible element, having the property of uniting readily with oxygen, thus passing into a gaseous state and forming a substance of very

great importance in the vegetable economy. In all cases of combustion, or the putrefactive decomposition of animals or plants, and in every act of respiration by living creatures, carbon and oxygen combine and escape into the atmosphere in a gaseous form, as carbonic acid. Not the smallest plant can grow and thrive, unless it imbibe and appropriate a portion of this acid, decomposing it into carbon and oxygen and using the carbon as its chief element.

Other elementary substances likewise are contained by various plants, and are of essential importance.—Such are:—

1) *Chlorine.* As a simple substance this is procurable only in the form of gas. For this purpose six parts of muriatic acid are poured on one part of pulverized peroxid of manganese, in a flask, which is to be then heated in a small bath. The chlorine gas developed is washed by passing it through a second jar called the "wash-bottle," (fig. 8.) containing wa-

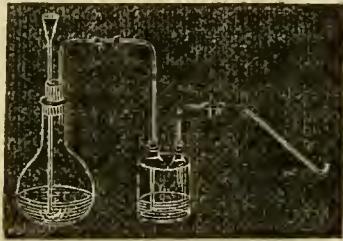


Fig. 8.

ter, and is then collected in vessels containing hot water. As chlorine is much heavier than atmospheric air, it may be collected by passing the conducting tube down nearly to the bottom of the receiving jar (fig. 9.). While the chlorine gas enters below, the



Fig. 9.

atmospheric air is discharged above. When the jar or bottle is full, which may be known from the greenish color of the gas, it should be closed tightly with a greased stopper. Chlorine is one of the heaviest of the gases, 100 cubic inches weighing 76½ grains. Hydrochloric acid is produced by means of "Woulfe's apparatus," (fig. 10.). Chlorine never occurs pure in plants, but always in combination with other substances. It readily combines with other bodies, and

supports the combustion of many. It is a constituent of a large number of plants, and is indispensable to the growth of those in which it is found. It is the most

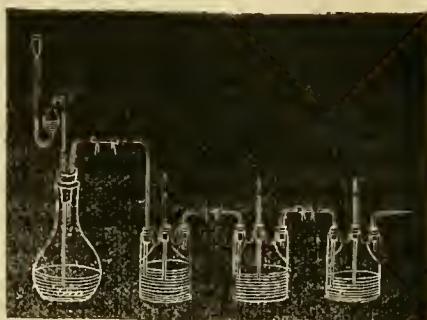


Fig. 10.

efficient agent for disinfecting apartments or places containing offensive odors and miasms, and is much used during the prevalence of contagious or infectious diseases. From its property of destroying vegetable colors, it is also very valuable and much used for bleaching linen and cotton cloth. Seeds which have lost their vegetating power, regain it if immersed in water containing a small portion of chlorine, on being exposed to the rays of the sun—which seems to indicate that the oxygen of the decomposed water is the active cause. Many marine plants exhale chlorine, and this is probably the reason why the atmosphere in the vicinity of the sea frequently contains so great a proportion of hydrochloric acid as to corrode the leads of houses—the exhaled chlorine uniting with the aqueous vapors of the air.

2) *Sulphur.* This substance is found in many plants and in various forms, but always in a state of minute subdivision, and is essential to their thrifty growth. Sulphur combines readily with oxygen, forming sulphuric acid, which acts an important part in agriculture. Sulphur, as a simple substance, is never found in soils; though it is met with abundantly in chemical union with other substances, and will unite with all the simple bodies, except nitrogen.—Pulverized sulphur has been employed as a fertilizer or stimulant in the cultivation of clover, and produced nearly the same effects as gypsum. The efficacy of this substance being thus ascertained, it follows that it would be injudicious to calcine gypsum by fire previous to its application to the crops or soil, because the sulphur it contains would thereby be volatilized and dissipated in the air. The application of dilute sulphuric acid to growing crops has never been found beneficial, but when applied directly to soils containing much carbonate of lime (common limestone) its action is favorable, resulting in the production of gypsum, which can be slowly taken up by the succeeding crops.

3) *Phosphorus.* This substance is somewhat similar to sulphur, but much more inflammable, having a strong affinity for oxygen—which it is constantly

taking up from the atmosphere, even when not burning,—and it is luminous in the dark. Phosphorus is prepared in large quantities from burnt bones, which contain it in the phosphate of lime. The bones are first boiled to remove the gelatine, and are then calcined until they become quite white. After being pulverized, they are digested in dilute sulphuric acid. After standing a day or two, the clear liquid is decanted from the sediment, or passed through a filter to free it from the insoluble sulphate of lime, resulting from the action of the oil of vitriol on the bones. It is next evaporated to the consistence of syrup, mixed with pulverized charcoal, and dried.—The dry mass is then introduced into a stoneware retort, the neck of which is connected with a wide copper tube (fig. 11.). This tube passes through a

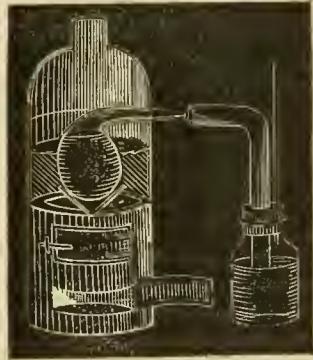


Fig. 11.

cork into a glass receiver containing water enough to cover the open end of the tube. A smaller tube, also passed through the cork, conducts off the useless gases evolved. The retort being placed in a furnace is very gradually brought to a red heat. Gas alone is evolved at first, but is soon succeeded by vapor which becomes condensed in the wide tube down which it flows into the receiver as phosphorus. The operation requires great care, as there is always danger of failure from the breaking of the retort. Phosphorus is never found free in nature, though it is a substance of the utmost importance in the cultivation of cereal crops, as without its presence the grains cannot be perfectly formed. It exists in some combination in almost all plants; and is found, as phosphate of lime, in the bones of animals. It is insoluble in pure water, but readily soluble in alcohol or oil; and its solutions have the smell and taste of garlic.

4) *Silicon.* This is a substance as yet very imperfectly known, though of great importance to the farmer, being the chief constituent of silicious earth and of pure sand. As it does not occur pure in nature, it is rarely seen even by chemists; and the preparation of it is a difficult process. In nature, it is found only in combination with oxygen, or silica, and is one of the most abundant as well as most important substances known, constituting probably one-sixth part

of the entire crust of the globe. To obtain silicon in its pure state, the double fluorid of silicon and potassium is mixed with the metal potassium cut into small pieces, and the mixture is heated over a spirit lamp in a glass test tube. As soon as the bottom is heated to redness a lively ignition ensues and pervades the entire mass. When cooled, after the ignition has subsided, the residuum is treated with water, which dissolves the fluorid of potassium, and the pure silicon remains. The silicon thus obtained is a dark brown powder, without metallic lustre, and is a feeble conductor of electricity.

In combination with oxygen, as silicious earth, it constitutes the principal part of most minerals and soils, and is found among the incombustible elements of plants, some of which—the reeds and grasses—have a thick crust of it deposited in their bark or outer coat. It occurs also, though in remarkably small quantity, in the bodies of animals, particularly in the bones; and it is found in almost all spring water. In combination with alumina and oxid of iron, it forms clay; but does not become plastic by an admixture of water alone.

The grasses and cultivated grains require large supplies of silicious earth, and it is therefore essential not only that that the soil contain it, but that it be found there in a state readily soluble in water, or as a hydrate. Many soils, however, contain it in such superabundance, in this state of solubility, as to be sterile mainly from this cause—the plants receiving greatly more silicious earth than they can assimilate. But some soils, also, contain less silicious than is required by them, to be productive; as is shown by the chalk lands of England, which are speedily improved and become fertile on receiving a dressing of sand—the cultivated plants, particularly the cereal grains, being thus enabled to supply themselves with the requisite proportion of silicious earth. Elm, pine, and birch trees thrive in sandy soils, because they require much silicious earth for their growth.

POTATO ROT.—While our neighbors of New York, Massachusetts, and other States are complaining of the extensive prevalence of the potato rot, thus far, we have heard no complaint from any portion of our own State. In our own immediate vicinity, the early potatoes were never finer. How the later ones will turn out, remains to be seen, though from present appearances, we do not anticipate the prevalence of the rot to any serious extent.

NOTHING sits so gracefully upon children and makes them so lovely, as habitual respect and dutiful deportment towards their parents and their superiors.

THE influence which woman exerts is silent and still, felt rather than seen, not chaining the hands, but restraining our actions by gliding into the heart.

Spring Wheat.

This grain is already very important to large farming districts in Pennsylvania and may most profitably be cultivated in many parts of the State where winter wheat in a great measure fails. The objections urged against it generally, are three. 1. That it is inferior in quality. 2. That it is liable to smut; and 3. That it is an uncertain crop owing to its being so frequently blighted and shrunk by mildew. But from an experience and examinations of seven years I am convinced that these objections are not well grounded. As in all crops, the quality depends much upon cultivation. With good cultivation the Italian wheat weighs sixty to sixty-two pounds and yields forty to forty-three pounds of superfine flour to the bushel.—The flour, although not quite as white, makes as good bread as any winter wheat. It has usually a slight yellowish tinge. If wheat were not *too much* judged of by the whiteness of its flour, I doubt not that good Italian wheat would soon rank as high in the market as Mediterranean winter wheat.

The second objection is entirely obviated by a proper preparation of the seed. I have had no smut for many years except where I have sown wheat without washing and liming. My process is to wash my wheat thoroughly in strong lime, which raises to the surface, all oats and other light seeds, which are skimmed off. While wet it is thrown upon the barn floor and finely pulvressed quick lime in small quantities is sifted over it. The whole is so mixed that every kernel is coated with lime. It may safely be left in this way for several days before sowing. If sown immediately, the lime is unpleasant to the hand, and to prevent its injuring the sower a small quantity of gypsum is scattered over it. No smut is ever found in spring wheat prepared in this manner. The salt, lime and gypsum are all admirable manures.

The third objection is obviated by early sowing.—In large districts in the northern part of the State it is difficult to plow early. The soil is a heavy clay and loam and retains the water very long. It is absolute ruin to the crop to plow while wet, and consequently the farmer who relies upon spring plowing for his wheat will be unable to sow before the last of April or the first of May—a month too late here.—The plowing must be done in the fall and the sowing at the earliest practicable day after the frost is out of the ground. The best spring wheat in quantity and quality, which I have ever known raised, was upon a green sward, which had been turned under late in November and upon which the wheat was sown without further plowing, the latter days of March.—A very light dragging lengthwise of the furrow, before sowing and the wheat lightly was dragged in so as not to raise the sod. Sown in this way it will be fit to harvest the latter part of July. Wheat which ripens in July is seldom affected by mildew. Two bushels of seed should be sown per acre.

I have tried the Baltic wheat, which is said to be successfully cultivated in Vermont, but it is greatly inferior in quality as well as quantity to the Italian.

WM. JESSUP.

Montrose, Aug. 16, 1851.

Education of Farmers' Daughters.

No. 2.

MR. SPANGLER:—Agreeably to promise, I offer a few more suggestions in regard to the education of farmers' daughters, believing, as I before asserted, that the columns of your valuable Journal should not be entirely monopolised by the "lords of creation."

The very prevalent but erroneous idea, that woman is mentally inferior to man, has exercised a powerful influence upon the mind of the farmer in regard to the education of his daughters. Many parents conceive their daughters fit only to become familiar with household duties—to spin, sew, knit, understand culinary operations, and attend to household affairs generally. All these duties should be thoroughly understood, and the parents who neglect instructing them in these important departments, are scarcely less remiss than those who neglect the cultivation of their intellects. Fortunately, however, this pernicious error is fast dying away. The school house and newspaper are shedding abroad through the land their genial influences, and fast dispelling the clouds that have hitherto intervened between the minds of many persons and the education of their children.

Speaking of woman's natural inferiority, recalls school-boy associations. How often have we seen boys made to blush at their own ignorance in the recitation room, as the girls at their side would promptly answer the questions which had sorely puzzled them. And yet, when arrived at a suitable age, the boys are sent away to academies, boarding schools and colleges, while the girls, according to long established custom, have their places assigned them in the kitchen, to perform the drudgery there. Now is not this morally wrong. To say nothing of the partiality shown the boys, is it not a pernicious error, to endeavor to impress upon the minds of the future mothers and heads of families that their sex is unfit for any other duties than those which ill advised economy has for centuries assigned them. You, Mr. Editor, should give the aid of your pen in behalf of the *emancipation* of our farmers' girls from the cruel and unjust servitude to which they are subjected. But understand me, I do not by this mean that our girls should not be taught to work, or that they should have a fashionable boarding school education—be taught to despise honest industry—to prefer crochet work to the knitting of good warm hose for themselves and fathers and brothers—to thump fashionably upon a guitar or piano, and not know how to cook a potato or fry a beefsteak. I would have them instructed in all useful branches which would fit them, when done with their household duties, to sit in the parlor and con-

verse intelligently. I would have them familiar with history and geography, and thoroughly versed in grammar, and where time and opportunity allowed it, the more elegant branches should be taught them. This would fit them to lay the foundation for the education of their own children, independent of the schoolmaster. Who will pretend to estimate the immense change that would be wrought in the intelligence of coming generations, if the mothers that are to be, were educated sufficiently well to enable them to impart the rudiments of all the important branches of education, before placing them under the care of teachers, who, unfortunately, are too frequently better qualified to dig than train youthful intellects.—How greatly would it enhance the respect which children entertain for parents, if they found in them competent instructors, ready and willing to assist them in their studies and give them the information they generally are unable to procure from country schoolmasters. What more enchanting sight than that of an intelligent mother laying the foundation of a son or daughter's future intellectual development. How kind and patient her teachings. Understanding fully the temperament and abilities of her child she adapts her system of teaching accordingly and the consequence is, they pursue their studies more cheerfully and understandingly.

With your permission I will renew this subject at some future day.

PLOW BOY.

Lancaster, Sept. 10, 1851.

Agricultural Nuisances, No. 2.

WHITE DAISY, OX EYE DAISY, WHITE WEED, RICHARDSON'S CLOVER.

French, L'œil de Bœuf. *German*, Die Wucherblume.

Leucanthemum vulgare, *Lam.* *Chrysanthemum Leucanthemum*, *Linneus*. *Matricaria Leucanthemum*, *Scopoli*. *Chrysanthemum montanum*, *Willdenow*.

It is a true *Leucanthemum*, a genus established by Turneforte. The name is derived from the Greek *Leukos*, white, and *Anthemon* a flower in reference to its white rays. The genus contains twenty-two species. But three are found in North America, two of these are natives of Arctic America, and the third is the plant under consideration, which is a native of Europe, but which has become extensively naturalized, and is a vile weed, wherever it is found.

It belongs to the 19th class, *Syngenesia*, and the 1st order *Æqualis*, in the Artificial System of Linnaeus—to order *Compositæ* and tribe *Senecioranidea* of De Candille and to subtribe *Anthemidæ* in Torrey and Gray's Flora of North America.

The root lives for many years, and seeds up many stems every year.

The stem grows from one to two feet high, mostly simple, but sometimes branched; it is marked with lines that are purplish and somewhat hairy. The leaves are one or two inches long and one-third to two-thirds of an inch wide, wedge shaped tapering to

the base, smooth on both sides, with the edges cut into rounded teeth. The heads of the flowers are from one to two inches in diameter and but one on a branch, the rays of the flower are white, and in length about equal to the yellow central part. The leaves around the head (involucre) has rusty brown margins, and the seeds are smooth and of a dark purple color.

This plant somewhat resembles the "feverfew," and the "garden *chrysanthemum*," but is readily distinguished by its large flowers, and very white rays. Its annual roots, and hardy nature, make it difficult to eradicate. It produces seeds in great profusion, and if permitted, soon takes possession of a farm to the exclusion of important plants. I believe it is utterly worthless, though I have seen some cows occasionally crop it. It has been asserted that it improves the quality of butter, but I am assured that this is a mistake.

It is very abundant in the upper end of Bald Eagle valley, and is rapidly extending itself. Annual cropping and plowing appears to be the most effectual method of destroying it that I am acquainted with, but even by this means the whole community must co-operate, and vigilantly destroy every vestige of it, for it is almost useless for one farmer to contend against it, if his neighbor's field constantly furnishes seeds for new plants.

J. M. M'MINN.

Unionville, Centre co., Sept. 15, 1851.

The Potato Rot and a Remedy.

To the farmers of Pennsylvania I would say, the potato disease is not a worn out subject. It is again in our midst, and still invites inquiry, and with us it is likely to remain so long as a certain winged insect continues to infest the plants. The season being so far advanced, I will reserve a description of this destructive insect for a future communication. Yet if in the meantime, any of my fellow farmers feel incredulous upon the subject, and are desirous of having a sight of the pest, they can be gratified by calling, within twenty days, at Pleasant Mount, Wayne county, and visiting, with me, the potato fields of this region, from eight to ten o'clock in the morning, or from five to seven o'clock in the evening of any clear day. I will show them their mode of attacking the vines—how their poison comes in contact with the atmosphere, and in conjunction with it, impregnates the sap, carrying disease and death with it. Wherever there is a change of atmosphere, from genial warmth to cold or chilly weather; with the return of the warm weather, we have certain evidence that the destroyer passed in and out during the change.

A certain remedy against the potato rot will, I fully believe, be found in the following mixture sprinkled or dusted upon the vines, commencing, for early potatoes, three weeks after they appear upon the ground, and for later ones, two weeks, or when the stalks are about six inches in height. This dusting is to be

continued at least twice a week, until the potatoes are matured, and always on the first clear or moderate day, after a rain.

My mode of cultivation is this. After having plowed my ground at least ten inches deep, I plant the potatoes three inches deep, covering them immediately with thoroughly pulverised earth. I never manure in the hill unless it is to drop half a gill of air slacked lime on the potatoes in each hill. If the soil is a stiff clay, or rests on a hard pan, then it should always be subsoiled to the depth of fourteen inches or more, and if turf, the slice should be turned six inches thick, and the subsoil stirred to the depth of eight to ten inches more. Harrow well with a double hinge harrow, planting on the surface or making a broad shallow hole with the hoe, and be careful not to cut through the turf.

The mixture to which I have referred above, is as follows: Two pounds of Scotch snuff or finely ground tobacco; two quarts of lake or Nova Scotia plaster, eight quarts of fine sifted, air slaked lime, mix these ingredients well. Procure a stone jar that will contain four gallons, into which place a large handful of green tansey leaves, and on the top of the tansey place the above mixture. Cover the jar and let it stand for one or more days. The mixture will then be ready to be dusted over the vines, which may be done by procuring a tin vessel with the bottom perforated like a flour duster or pepper box. Continue the dusting twice a week, until the potatoes are thoroughly ripened. Where this plan is pursued, no potato rot will be found.

B. F. ROGERS.

Wayne county, August 9, 1851.

[We give the above a place in our columns, not because we have much faith in its efficacy as a remedy for the potato rot, but because we feel desirous of hearing all that can be said on the subject, hoping that finally, we shall arrive at the true cause of the disease.—ED.]

Statements of yields.

MR. EDITOR:—Permit me to suggest to your consideration, the propriety of devoting a considerable department of your Journal to statements of common yields from improved soils—their condition when first tenanted by their proprietors—by what process of cultivation they have been improved, &c. Articles of this character would have a tendency to stimulate the readers of your Journal to active exertion, and prompt them to efforts for increased improvements in every department of farming. Such statements would also increase the number of your readers, as well as the popularity and patronage of your journal.

The almost invariable result of publishing accounts of very extraordinary yields and their expensive cost of attainment, by wealthy farmers, or merchants, lawyers or other professional men, being entirely be-

yond the reach of the great mass of farmers, are read—merely read and admired, perhaps spoken of; but the experiment of attempting similar results by the same means is rarely undertaken. The desired effect is thus lost, and the consequence is, a deep-rooted prejudice on the part of farmers of moderate means against all “book farming.” My idea of a Pennsylvania Farm Journal is, that it should be conducted on principles that will have a tendency to draw out the knowledge of the common farmer, and furnish him with a medium through which to publish the same.

The adoption of such a course would render it an interesting and valuable monthly visitor to every farmer’s fireside, however humble his means, and would also naturally increase its popularity. The leading characteristic of nearly all the agricultural papers published in the United States is, a disposition to portray in their most glowing colors, the experiments of men whose wealth enables them to spend more for the success of a single experiment, than the entire amount of many small farmer’s yearly income. They do not sufficiently consult the interests of the great mass of farmers, and consequently much of the good they might effect, is lost. This will account for the comparative scarcity of agricultural papers. The great question with the conductor of an agricultural periodical should be, what course shall we adopt to induce the mass of farmers to enter the field and give us the valuable results of their observation and experience? I would answer this query by saying to you, adapt your journal to the tastes and capacities of the great majority of our farmers—those of moderate means—invite them to write for the Journal and let them know while doing so, that others of their class are doing the same. By this means, the vast amount of valuable practical experience and observation which is now confined to the family circle, or small neighborhoods, will find its way to every farm house and prove a source of inestimable benefit to our agricultural interests.

If the few plain suggestions I have offered, be worth an insertion in your journal, I shall feel gratified.—If they are not, throw them aside, and I shall not be displeased. I fervently desire the perpetuation of the Farm Journal, and do all in my power to sustain it, and it is only with the hope of aiding in establishing it beyond the contingency of a doubt, that I write you this.

I do not wish you to infer from what I have written that I object to the publication of the results of extensive and costly experiments. I do not. My object is, not to exclude them, but to pave the way for the publication of such statements as are calculated to benefit the every day farmer also. Let them go hand in hand, only give the small farmer a chance of being heard also.

I purpose communicating to you several statements

of what I shall term common yields, and shall do it with the hope of drawing into this broad field of labor a greater number of farmers similar in character to myself. This will open an acquaintance with practical farmers in every portion of our State, so that when we meet each other at our State Fairs, we shall feel that though strangers in fact, we know each other as comrades in the columns of the Farm Journal.

J. WICKERSHAM.

Lewisburg, York co., 1851.

[We like the suggestions of our correspondent, and will endeavor to improve upon them. At the same time we commend his plain, common sense way of speaking to every reader of the Journal. From the start we have striven to enlist the interest of the mass of farmers and thus far have succeeded, we think, in presenting a rich and varied store of practical agricultural information. Our purpose has ever been to give the Journal such a character as will command it to every friend of agriculture. We have combined the practical with the theoretical and scientific, and with the aid of such good men as our correspondent above, hope to render it still more valuable and interesting.—ED.]

Deterioration of Pennsylvania soils and Agricultural Education.

MR. EDITOR:—So much has the subject of agricultural education been harped upon by the agricultural press, that farmers generally might be supposed to be fully awake to the importance of the subject. That a deeper interest than has ever before manifested itself in regard to this important point, is felt through the agricultural community generally, is very apparent; but it is equally apparent that, unless this interest becomes more deeply seated, but little good will ever result from it. Unless the fathers of the rising generation take the matter in hand, and energetically and perseveringly press it onward, but little hope exists, that Pennsylvania agriculture, as well as the agriculture of the United States generally, will for a century at least be emancipated from the thralldom that now enslaves it. My honest convictions are, that Pennsylvania is the best farmed State in the Union, but it is an undeniable fact, that with each successive year the fertility, and consequently, the value of her lands is lessened. The same “skinning” system pursued so largely in Virginia, Maryland, New York and elsewhere, is indulged to a hurtful extent here, and unless superseded by a better one, we shall find that our soil, like that of Virginia, will be thoroughly impoverished and our farmers be compelled to seek new homesteads.—This is truly a startling assertion and one that will perhaps meet with but few believers; but it is an assertion that is sustained by stubborn facts, and a truth which sooner or later the farmers of this commonwealth will be called to realize.

What else is to be expected where lands are cropped from year to year, with scarcely an interval of rest, and what is more, with not enough manure to restore to them a tithe scarcely of the fertilizing constituents which these successive crops take from it.—Is it a matter of surprise that under such a system of tillage our lands should deteriorate in quality—that lands which forty years ago yielded thirty bushels of wheat to the acre now yield scarcely the half of it? Not at all. It is a legitimate consequence flowing from a system of farming which may answer very well for a few years on new land, but which will as certainly exhaust them eventually, as that the sun shines in the heavens. Take up the census report of 1850, and select for the experiment the oldest and best farmed counties in the State—say Lancaster, Montgomery and Chester—and “figures that will not lie” will satisfy you that a comparison of the yields of the same number of acres now, with the number cultivated forty years ago, will show a diminution in quantity of nearly one-half. If the evil were arrested here and an effort made to retrieve the position we have lost, there would remain a bright hope; but unfortunately it is still progressing. And now the question comes up, shall we, as farmers, continue this ruinous course, until, through absolute necessity we shall be compelled to abandon our lands and seek homes elsewhere. Every thinking farmer will at once reply, not so long as there exists a remedy. But where is the remedy and how shall we apply it?

I answer, the aid of agricultural science must be invoked. We must combine more science with our farming. We must prepare ourselves to analyse our soils in order that we may know precisely what elements of fertility they have lost, and the most effectual and cheapest mode of restoring them. The science of economical manuring must be more thoroughly understood and practised. Valuable manures which are now wasted in reckless profusion by the generality of farmers must be husbanded with that jealous care which characterises the farming operations of Europe.

But many of our older farmers will say, we have no time for such studies—our lands will last another generation, and let those who come after, adopt the plans recommended. It is not expected that the old farmers will take hold of scientific studies; but this does not prove that they are not deeply interested in the advancement of agricultural science. It is the duty of every farmer who has a son, to give him such an education, as will enable him to repair the evils which have resulted from the want of it in his parent. Every young man destined for agricultural pursuits, should have such educational facilities as will fit him to become not only a practical, but a *scientific* farmer.

Do not, brother farmers, let the word *scientific* alarm you. There is nothing in it to terrify. Agri-

cultural science is only a familiar acquaintance with the constituents of the soil you cultivate, its wants and adaptation to the growth of particular crops. It is, in fact, nothing more than a friendly acquaintance with nature's operations—a study of the manner in which she replenishes the earth so as to perpetuate its fertility—a practice of the economy she adopts.

Here again, however, another important query is suggested. How shall our sons be taught without a teacher? Teachers they must have, and in order to procure them, it is only necessary for the farmers of this great commonwealth to knock at the doors of our legislative halls and demand them. Denial need not be feared, for so little has been asked by and granted to the farmers, that with the consciousness of demanding only their rights, they may insist upon the establishment of agricultural schools and colleges.—Here, then, is a remedy—will the farmer apply it? Will he put forth an effort to restore to the soil of Pennsylvania its original fertility, or will he permit the present ruinous system still to be continued, until that which would now prove an effectual remedy will fail to be efficacious. Let them take warning by the examples around them before it is too late.

E. P.

West Chester, September 10, 1851.

[There are many important truths contained in E. P.'s communication, although we are not prepared to endorse all he says. His view of the "skinning" process now so much in vogue is undoubtedly correct, and the deplorable results he anticipates, will certainly follow if it is persisted in; but we do not believe that Pennsylvania lands have deteriorated to such an extent as he represents. The census report may show a falling off in the yield, but E. P. must remember that within a few years past many of the poor lands of our State, which for a long period were considered unfit for cultivation, have been taken up by enterprising farmers, and are fast being brought into fine condition. Lancaster county furnishes clear proof of this. (See article in the June No. of the Journal, page III, entitled "Progress in Farming.") The yield of these lands, although double that of five years since, is still unequal to that of the better lands. A few years more will tell a different tale, and then only can a correct estimate be made.

We also agree with our correspondent that Pennsylvania is the best farmed State in the Union. This has always been our impression. The editor of the *Horticulturist*, (pretty good authority, by the way,) in speaking of the greater increase of the rural population in Pennsylvania than in New York, attributes it to the fact that the former State is better farmed than the latter.

And finally, we agree with our correspondent that it has become the imperative duty of every farmer to give his sons a good education. A scientific system of agriculture must sooner or later be adopted; the

sooner the better. If old farmers will not devote attention to scientific pursuits, the young ones must; and if the parents will not educate their sons properly, the sons must take hold of the matter themselves. Excellent books in almost every department of agriculture may now be had for small sums. Ten years ago, such was not the case. The young farmer, therefore, is also without an excuse, if he does not unite the scientific with the practical. And so far as agricultural schools and colleges are concerned, let that subject be agitated until the desired object is secured. It only wants a vigorous, combined effort. Right is on the side of the farmers, so that they may with a clean conscience ask for their establishment.—ED.]

Wayne County.

A correspondent from Wayne county, writes us as follows: It is gratifying to me to inform you that away up here in little Wayne, with our high hills and stony valleys, we have an agricultural society that has been existence four years and is now in a flourishing condition. Our farmers are not as far behind those of the more southern counties as our location would indicate. We have a good portion of reading farmers; but many of them prefer the news of the day to valuable agricultural information. They are unwilling to spend a dollar to make themselves familiar with the experience and experiments of others. But a better day is coming and with the aid of the *Farm Journal*, I hope soon to see better things. If our farmers, however, are backward in subscribing for agricultural papers, it is because Pennsylvania has, until you started the *Farm Journal*, had no paper of her own. Now that you have made so good a start and are furnishing us monthly with so much valuable and interesting matter, nothing but total indifference on your part can prevent it from having a tremendous circulation. What I can do in our noble little county shall be done in its behalf, and I hope to send you a large list of subscribers soon.

Honesdale, Wayne co.

C. S.

CORRECTION.—Mr. Spangler:—Several errors crept into my communication on Guano, which was published in the September No. of the Journal. In the third paragraph, the word *and* before the words "when the corn was up" should have been omitted. I meant to say, "put on when the corn was up." The other is near the end of the last paragraph. After the word "condition" should have been inserted, "the difference in" meaning that the difference in yield was not so great as the difference in the appearance of the corn during its growth.

JNO. MILLER.

Oregon, Lancaster county.

SEED.—Where seed is wished to be saved, the sorts must be grown apart, as far as practicable, for they are very susceptible of mixture, if even within fifty yards of each other.

A word on Manuring.

MR. EDITOR:—An inquiry is made by W. H., of Bedford, whether it is better to plow down manure immediately after it is taken from the yard, than to let it be exposed to the influences of the sun some time before plowing under.

My little experience may not be considered as absolutely worthless amidst the boundless stock of knowledge on the subject.

The great aim of the farmer should be to make his supply of manure sufficiently enrich as many acres as possible: in order to do this, a pound should not be needlessly wasted. In the saving of these composts, after having been completely manufactured, I consider lies the great economy in manuring. In the outset, the yard should be so formed that none of the juices can escape into the neighboring fields, but be retained in the straw, weeds, leaves, &c. By top dressing, or surface manuring, I am led to believe that only in a few instances are we able to retain more than a small proportion of the fertilizing qualities of the manure in the soil, and those few instances are, when it is put upon light sandy, or loose gravel land, just before a long wet period of time—light showers and hot sun, being as destructive to it as to well seasoned hay.

The system of manuring which I follow is better adapted to my circumstances, than any which I have yet been able to settle upon.

Taking into consideration that it is a leisure season for the teams on the farm, and the stage of the decomposition of the straw manure, the month of November is the time for drawing. If the ground is to be plowed in the fall, one team is plowing, while two teams are drawing from the yard at the rate of about thirty-five loads per day; and if the land requires it a day's work covers one acre, evenly spread and turned under as soon as possible after the arrival at the field. If the land is not to be plowed until spring, I station a man in the field whose special duty it is to level off the place where each heap is to lie, assist in unloading, and cover each pile—which consists of half the load—with a layer of earth about six inches in thickness; which when finished resembles a small potato heap covered for the winter. This coating of earth not only retains all the acids which are so essentially valuable, but protects it from the rains and snows of winter, which, if the manure is left exposed, carries a great portion of the juices into the earth immediately under it, enriching the spot to a much higher degree than is desired. These rains at the same time taking possession of the compost, rendering it as much the less valuable as the quantity of water is increased. These heaps are put in straight rows across the field, that the plow may follow as closely after the spreading as possible. Some may question the economy of incurring this extra labor, but if they will consider the value of a load of ma-

nure prepared for use in the field, and then feel that during a few weeks the sun and wind are stealing away nearly half its virtue, there will be but little hesitation in protecting it, in part, from the reach of those "thievish elements."

If any of your correspondents have a more economical mode in the management of yard manures, information concerning it, would be received with gratitude no doubt by many, as it is a very important portion of the work of a farm.

W.

Athens, Bradford co., Sept. 16, 1851.

Fruit Stealing, &c.

MR. EDITOR OF FARM JOURNAL:—In the last No. of the Journal, you request "some of your readers versed in the philosophy of morals, to define the difference in criminality between robbing a man's orchard and robbing his house." You say, "you are aware the law makes a broad distinction between the two," but contend that "this is a distinction without a difference." Verily, if there is any difference the heinousness of robbing a man of his fruit, in my estimation at least, is far greater than robbing his hen-roost, his smoke house, or even his pockets. The latter crimes are mere matters of dollars and cents, and which a little economy will repair—but the robbing of choice fruit and mutilation of trees, money alone will not replace, it requires time; years of labor and toil.

As I do not at this time intend to inflict on you and your readers a thesis on moral philosophy defining this position, I will merely state a fact bearing on the question, and which will show the enormity of the *crime*, (I can give it no other name) that *gentlemen* sometimes thoughtlessly commit.

It is well known to all readers of agricultural publications, that the late Judge Buel, of Albany, N. Y., devoted much of his time and eminent talents to the improvement and elevation of agriculture and horticulture. Among other of his pursuits he employed many of his leisure hours in improving our fruits—following the theory first promulgated (if I mistake not) by the late Andros Knight, president of the London Horticultural Society—by impregnating the stigma of one flower with the pollen from another of a different variety. This course Mr. Buel pursued with the hope of originating something superior—by impregnating the stigma or pistil of a choice variety of cherry with the pollen of another fine variety, and carefully protecting the flower operated upon with gauze, to prevent the adventitious intermixture of pollen from another variety, by bees, wind, &c.—When the impregnated fruit became ripe, the stone, or pit, was carefully planted—a young tree raised—and from one year to another carefully nurtured and watched, and after ten years of ceaseless care the Judge's long anticipated hopes were about to be realized by the tree showing flowers, and a single cherry, the first fruit of the experiment, was swelling towards

maturity. You may well suppose this cherry was watched and guarded with extra care, and visited daily, nay hourly, by the Judge, as it was about ripening.

One morning while the Judge was engaged in his library, two gentlemen, intimate friends of his, called upon him, and as he could not at the moment attend to them, his friends made free to take a walk round his grounds, and probably, by mere chance, happened to pass by a young cherry tree with a single fruit on one of the twigs. One of the gentlemen at once reached up his hand and thoughtlessly plucked the fruit, which soon vanished from sight, the gentleman remarking, that it was a most excellent cherry! After returning to the house, Mr. Buel had got through with his business, and at once offered to accompany the gentlemen over his grounds. He was particularly pleased that they had called upon him at this time as he wished them to test and examine with him the merits of a new cherry now fully ripe, and which he had originated, and for ten years of his life looked forward to, to see the result of his experiment. The Judge led his friends towards the identical cherry tree from which his friend had plucked the fruit but a few moments before. But on coming to the tree and finding his favorite cherry gone, his chagrin and mortification may be more easily imagined than described. And what were the feelings of the gentleman who so heedlessly destroyed the Judge's long cherished expectations? I will let the reader judge. The gentlemen soon took their leave, and the one who committed the act afterwards stated, that if money could have replaced the fruit on the tree, he would have considered a thousand dollars a mere trifle towards rectifying the error so inconsiderately committed, and the distress of mind which he suffered.

Some of your readers no doubt will say this is an extreme case. So it is: yet the crime is none the less, when a man, for instance, devotes his land, his money, and his time, to collecting and cultivating choice varieties of fruit, and after ten or fifteen years of anxious solicitude, when his trees may commence bearing, and he is about being rewarded for his labor and his pains with a crop of fruit, to find that *gentlemen with dogs and guns*, take the liberty of free ingress and egress to his fruit trees, "taking the best and destroying the rest." It is a crime of far "deeper dye" and should be so considered in the "eye of the law."

Hoping that the necessary steps will be taken to remedy this crying evil, I remain yours,

J. B. GARBER.

Floral Retreat, Sept. 15, 1851.

LIME IN OLD GARDENS.—Old garden soils which have been very liberally manured, sometimes become sour for want of an alkali, and in such cases the use of lime, and even of quick lime, is judicious.

MR. EDITOR.—I was much pleased at observing an article in your last Journal, condemning the practice of fruit stealing, which has become so prevalent almost every where. Your sentiments on that subject coincide entirely with my own, and there is no doubt that every honest person in the community will sustain you in the position you have taken, and the estimate you have placed upon the character of the pilferer of his neighbor's fruit.

For years I have given considerable attention to the cultivation of fruits, and have succeeded in raising some of a very superior character; but when this is said, all is said. *A* have cultivated the fruit, but have scarcely had even the poor privilege of tasting or seeing it ripe, my peevish neighbors having invariably appropriated it to their own purposes. So discouraging have these frequent thefts been, that I have almost determined to cut down every fruit tree upon my premises, unless the future promises some hope of protection through legislative aid.

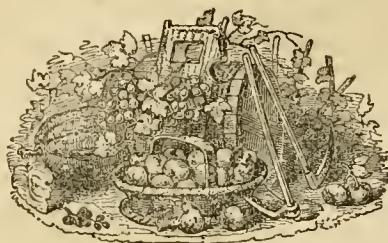
Why should the farmer and fruit grower not be protected in their rights. No other class of the community suffer more from dishonest persons, while none are so poorly protected. Every thing belonging to the merchant is carefully guarded by the law, while the farmer is left to the mercy of plunderers on all sides, and in many cases without any redress. Not only is our fruit stolen, but our farms are invaded at every point. Fences are torn down, our growing crops trodden down by idle hunters, and very often our corn fields are pillaged. If a word of remonstrance is offered, a volley of insolent abuse from these marauders is all the return we get. Several of my neighbors have, in addition to their fruits, lost large numbers of chickens, young turkeys, &c., and they inform me that it is as much as a chicken's life is worth to stray one hundred yards from the dwellings. Is not this a most deplorable state of affairs, and does it not demand redress? I think so.

Provision, I am aware, was made by our legislature last winter, against injury done to fences, and so far as that law goes it is an excellent one; but it is not comprehensive enough to protect the farmer in all his rights, and it is not only mine, but the earnest wish of all with whom I have conversed, that a vigorous effort will be made during the coming session of the legislature to procure the passage of a law that will effectually remedy these evils.

Somerset co., Pa.

R. EVANS.

SEEDLESS APPLES.—Mr. E. A. Graham, of Portland, Conn., writes us that seedless apples are produced in his neighborhood by raising the trees from layers. A branch of a young grafted tree is bent down and a portion of it covered with earth, where it remains till it has taken root, when it is cut away from the parent tree and planted out. We do not believe that the absence of seeds in the fruit is attributable to the mode of propagation.—*Genesee Farmer.*



Horticultural Department.

Evergreen Trees and Shrubs.

No. 2.

Cedrus Deodara, Deodar Cedar.—So named from its being used by the Hindoos in its native mountains as incense wood and accounted sacred; is, in our opinion, the first in gracefulness and beauty of all foreign coniferous trees, which have been found adapted to our climate. Differing entirely in appearance from the deep hues and bold and heavy outlines of some of the more stately pines and firs, its characteristic features convey the impression of something light, airy and graceful. The foliage of the deodar approaches a silvery color, more than any other evergreen, its branches are beautifully pendent, and it has the great merit of being quite a rapid grower.—To produce its best effect, it should be planted singly and somewhat apart from other trees. Its native locality is the Himalayan mountains in Asia, where it is found of immense size at an elevation of eight to ten thousand feet. Having been introduced into England and this country, within comparatively a few years, it cannot yet be obtained of very large size. The oldest specimen in England is but twenty-five to thirty feet in length. In the Queen's gardens, at Kew, there is a wide avenue, two thousand eight hundred feet long, lined with deodars.

Arancaria Imbricata, or Chili Pine, offers the most striking contrast to the preceding, that can well be imagined. It is stiff, formal and altogether unique, and has been most aptly compared to a “gigantic specimen of deep green coral from the depths of the ocean.” It is a native of the Cordilleras in South America, where it attains a height of one hundred and fifty feet. Its peculiarity is its pillar-like trunk, which, as well as the horizontal branches, are covered with scale-like foliage, closely overlaid or imbricated. The branches spring out from the trunk, in whorls or circles, and bear at their extremities immense globular cones the size of a man's head, and containing numerous nutritious and excellent nuts, a single fruit contains two to three hundred kernels, which are used as food by the Indians. They are eaten either fresh or roasted, and it is said the women prepare from them a kind of pastry. The fruit of these trees form the regular harvest of some of the native tribes of the Andes. From their not being

found north of thirty-six degrees south latitude, fears were at first entertained that it would not prove hardy in the United States, but the experience of various parts of the country has settled this question. We have had it in our nursery rows, during the winter without protection, and it has stood out, further north with the mercury several degrees below zero. We have found it to suffer rather more, especially the first season of being moved, from the hot sun, than extreme cold. With this, as well as many other exotics, when transplanted to a new climate and a new soil, it seems only fair, they should receive protection the first year, both summer and winter. A few cedar branches placed around as a shield from extremes of weather, till they become acclimated in their new homes, is a small trouble most amply repaid, and which would save many a plant and shrub from condemnation, as too tender. A portion of sand should be used in preparing soil for the arancaria, and there should be thorough under drainage to prevent the water from settling about the roots.

Cryptomeria Japonica or Japan Cedar, is one of the valuable discoveries of the agent sent out by the horticultural society of England. He found whole forests of it on the mountains of Japan, at the height of one thousand feet, and like most of the other trees and shrubs from that country, is believed to be perfectly hardy here. It was only introduced into England about three years since, and is there called the “queen of evergreens,” and is considered quite a rapid grower. One great recommendation in accordance with the prevailing taste of the day, for any thing in the shape of a tree that droops, is that this tendency is one of its striking peculiarities. With a very straight stem, which reaches one hundred feet, beautiful foliage, and very pendent branches, the Japan cedar is probably, going to be as great a favorite in the United States as any other yet introduced.—The wood is said to be very hard and elastic, “and withstands the most terrific winds or monsoons which devastate that country.” The soil recommended for this tree is a sandy loam. ,

Cedar of Lebanon, everywhere known by its historical associations, and its frequent use in scripture imagery as a symbol of grandeur and magnificence, is a tree perfectly hardy in our middle States, and is of course necessary in every good collection of evergreens. In its great longevity, its immense horizontal growth of branches which is not so observable in young trees, as when more advanced, and in general massiveness of appearance it is not equalled by any other tree. The largest specimen in England is seventy-two feet in height, eight feet in diameter at the trunk, and the diameter of the branches at the head one hundred and seventeen feet. A taller specimen, but not so large, is at the seat of the Duke of Wellington, one hundred and eight feet high. The oldest specimen in the United States is said to be in West

Chester county, N. Y., about fifty feet high, and planted upwards of forty years ago. The cedar of Lebanon is rather a slow grower, varying from six to twelve inches a year, and perhaps more, according to soil and cultivation, neither is it when small, particularly beautiful. It accommodates itself readily to most soils, and there is no difficulty with it after being once established. In its native mountains, the coldest parts of Mount Libanus and Taurus, travellers assert it is comparatively scarce, and that there are fewer trees to be found there at this time than in England. It is believed that the forests have never recovered from the operations of Solomon's four score thousand hewers.

Pinus Pinaster or *Cluster Pine*, *Pinus Sylvestris* or *Scotch Pine*, and *Pinus Austriaca* or *Austrian Pine*, all resemble each other in habit and general appearance, and are all well worthy of cultivation and perfectly hardy. The first is a great favorite in its native country, the south of Europe, and is distinguished by its very long leaves. We have found it difficult to transplant, except when quite small, and find it safer to import in pots, which admits of easy shifting into open ground. When once well rooted requires no special care. The Austrian and Scotch Pines are more generally known, are of erect and rapid growth, and the latter has short, stiff foliage, of rather peculiar green hue. Its timber, which is extensively used, is the deal of the north of Europe.

PASCHALL MORRIS.

Shrubs for Hedges.

The subject of live hedges for enclosures is, as I believe, entitled to more attention in this part of the country than it is now receiving. The great anxiety that was felt fifty or more years ago on account of the prospect of scarcity of wood for fuel or fencing, has very much subsided, the discovery of coal and its general use having released us from fears on account of fuel; and the great facility and small expense of transporting fencing timber by canal, river, and railroad, furnishes the supply in market, without difficulty or increased price, so that we scarcely give attention to its rapid diminution. But it is evident that the continued conversion of wooded lands to cultivated fields, diminishes the supply, and the increase of fences from diminishing the size and increasing the number of fields and plantations, increases the quantity required. On the subject of hedges, the first question generally asked is, "What tree or shrub is best suited for the purpose?" This can only be answered conditionally, having reference to the purpose for which the hedge is wanted, whether to restrain men, horses, cattle, swine or other animals, or only some of those named—the place where it is to grow, upon high or low, wet or dry, fertile or sterile lands, for we see in natural woods that each tree or shrub appears to have a particular soil and exposure favorable to its growth, and that in some localities it is

not found. These and other considerations which may be enumerated, will lead us to believe that a great variety of shrubs and trees may be used for hedging, varying, as the purpose, soil and exposure varies.

The properties of trees or shrubs requisite for a hedge, seems to be these among others, viz:

1. Stiff unyielding stem and branches, the direction of which can not be easily changed by so much force as they are likely to be exposed to, and an additional advantage would be, in their being armed with thorns to prevent pressure from being applied forcibly.

2. Great capacity for life, not only that the duration may be long, but that it may not suffer under hedgers discipline, which permits so much life that the hedge may not die, and so little that it shall grow only very slowly.

3. Suitable size, either naturally or by trimming or clipping; so that the soil shall not be much exhausted by the support of the hedge.

4. Suitability of the species to the soil, exposure and climate, where the hedge is to be made.

Of the species having thorns, the *Crataegus oxyacantha* or English white thorn has been more used in England than any other, and a few hedges have been made in this country; but it has not answered the purpose here so well as our native species, of which we have so many that *Crataegus* may be almost ranked as an American genus. The *populifolia* or Washington thorn has been more extensively propagated than any other in eastern Pennsylvania, but some hedges of the *Crus galli* or Cockspur thorn give reason to suppose that it will have some advantages over the former. Its very repulsive armature together with its spreading habit of growth will supersede the necessity of so close planting as the *populifolia* requires, especially if swine are not to be guarded against. Eaton, in his Manual of Botany, describes seventeen species of American thorns, nine of which are common in the northern States, and I would suggest that as all of them are thorny in a greater or less degree, it would be worth the attention of those who desire hedges, to gather fruit of each of the species found in their respective neighborhoods and subject them to direct experiment by forming hedges of each kind, it being I believe certain, that a hedge sufficient to turn cattle, may be made of any of our native species, some of which, however, are of low growth, and would require no mutilation to abate their growth, but only so much side trimming as to keep the hedge from taking too much room. The difficulty of raising the young thorn plants or quicks, has done much to prevent the introduction of hedges. The following method has succeeded well: Gather the fruit when ripe; crush the berries so as to break them that the seeds appear, mix the seeds and broken husks of the berry with an equal portion of very fine sand, put the whole in a heap and cover with six

inches of fine sand, turn the whole two or three times the succeeding summer, still covering, when turned, with fine sand, and in the succeeding spring, sift the sand from the seed, and having a seed bed in high tilth and very fertile, spread the seeds evenly over the bed, sift quarter of an inch of sand or loose earth on them and protect the bed from the sun, except early morn and near evening, by making a light scaffold over the bed a foot high and covering the scaffold with branches of trees or straw. Weed during the summer and give water in very dry seasons. The quicks may be planted out at one or two years old; but the ground in which they are to be planted should have a year's preparation, made perfectly clear of weeds and grass, very fertile and well plowed or dug over several times in the season. Some species of thorns have small berries about the size of a grain of allspice, the seeds of which will generally come up the first year, and may be planted the spring after they were gathered.

The OSAGE ORANGE or *Maclura aurantiaca*, a native of the southwestern States, has been spoken highly of as a plant for hedging, and many plants are now raised for that purpose. Although a southern tree, it is hardy with us, and is sufficiently stiff and thorny to prevent horses or cattle from breaking through.—It produces seed abundantly when staminate and pistillate plants are planted in the neighborhood of each other, but I fear it will be difficult to restrain it within hedging bounds. I have a tree that was planted about twenty or twenty-five years ago, which is now one foot in diameter and twenty-five feet high, and its yellow, mulberry like roots, extend probably twenty-five feet from the bottom of the tree. Some care is taken so to trim it, as to render the trunk approachable, but shoots from the trunk frequently come out and grow six to eight feet in a single season. I have some hope that by a different mode of treatment in trimming, and by planting wider apart—say three feet or thereabout—they may form good hedges. It will require much experience to determine the best mode of treatment, and will require the roots to be cut or a ditch kept on each side to prevent them from affecting the productiveness of the adjoining land. Seed will, ere long, be abundant, and I believe may now be obtained in the winter or spring at the seed stores. The seeds are large, and may be sown in the spring. They come up soon.

The HONEY LOCUST or *Gleditschia triacanthus* is a hardy tree, not less thorny than the Osage orange, and growing to a large size. I have seen some attempt to form a hedge of this tree; but with apparently much neglect. It made a hedge used for many years as an enclosure; but showing occasionally a gap mended with a fence rail. The result of the experiment was more favorable than I should have anticipated. The plants are easily raised and the seed large and abundant.

There is another class of small trees of which I have some hope that they may be so reduced as to do service as hedge plants, as the stems and branches are stiff and unyielding and the terminal buds and spurs partake somewhat of the form and nature of thorns. In this class are the Buckthorn or *Rhamnus catharticus*, the buffalo berry or *Shepherdia argentea*, the sheep berry or *Viburnum prunifolium*, the red plum and sloe or *Prunus americana* and *Spinosa*. Of the Buckthorn I have seen one hedge at the Bartram farm, planted, as I suppose, by John Bartram, the elder, but at the time I saw it, it was permitted to grow wild, and was not kept as an hedge or fence. It appeared as though it could be made effective. It is now very much vaunted as an hedge plant by writers in the Northern States and in the nursery catalogues it is marked ten dollars the thousand. The Buckthorn and all the others of this class are small trees and may therefore be permitted to grow vigorously without mutilation. Whilst I propose to resume this subject hereafter, I desire that those who have given attention to the raising of hedges and have succeeded well, will give us the result of their experience through the Farm Journal.

ALAN W. CORSON.

Montgomery county, Sept. 17, 1851.

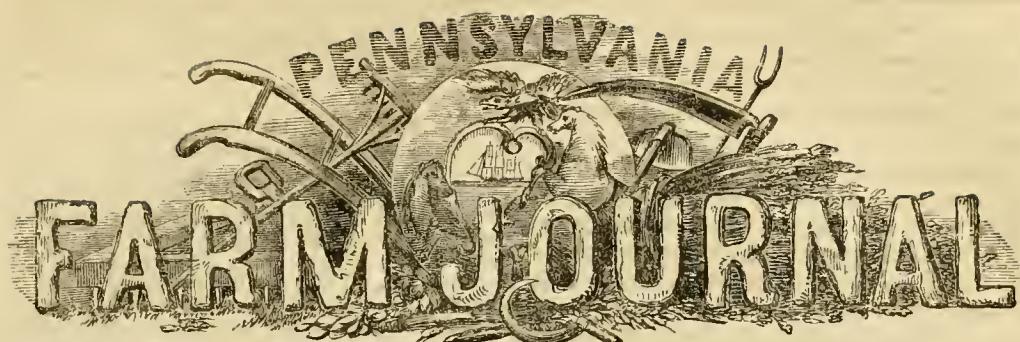
How to cultivate fine Cauliflowers.

MR SPANOLER:—In compliance with your wish, I send you a brief account of the cauliflowers, you noticed so favorably in a former number of the Farm Journal. The seed (which was of superior quality, I procured of Thomas F. Croft, seedsman, Philadelphia,) was sown about the middle of September, in an open border. When of the proper size I transplanted them into a cold frame, in which they were kept until the first of January, at which time they were transplanted into a hot-bed previously prepared as follows: Leaves two feet deep, covered with very rich compost to the depth of sixteen or eighteen inches. They were kept dry during the winter, but when they began to grow, plenty of water was given them, particularly when about heading. As much light and air was given them as the weather would permit.

JOHN RILEY,
Gardener to Insane Asylum, Phila.

[The cauliflowers above referred to, we noticed in the proceedings of the Penna. Horticultural Society, as well as editorially in the June No. of the Journal. They were certainly the most superb ones we ever saw, and Mr. Riley will accept our thanks for enabling us to lay before our readers his mode of treatment. It is simple, and within the reach of every one who desires an early supply of this favorite vegetable.—En.]

EARLY Nonpareil cabbage is one of the best sorts in cultivation. It heads freely, and is of a good size, and very delicate flavor.



PENNSYLVANIA FARM JOURNAL

VOL. 1.

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NO. 8.

THE FARM JOURNAL.

S. S. HALDEMAN, Editor.

American Association for the advancement of science.

This body held its annual meeting at New York, in August. The attendance of members from various parts of the United States was large, and the sessions drew together large and interested audiences of both sexes.

The citizens of Albany showed the members every attention, and they will long remember the hospitality and kindness with which they were greeted in the Empire State, which has done more for the cause of science than any other State. In fact, the Natural History survey has already cost about half a million of dollars, and is still progressing.

Professor L. Agassiz was president of this year's meeting and in his opening remarks he advised the American cultivators of science to look less to Europe for credit and support, standing upon their own merits and the correctness of the views advanced upon this side of the Atlantic. He recommends the establishment of local museums of the natural objects of different parts of the country—an important hint, but one which cannot be efficiently acted upon until our educational institutions have a better appreciation of general science infused into the bodies which control them.

There was not much matter of special interest to the agriculturist brought forward, as this generally finds its way to the agricultural societies and the periodicals devoted to this subject. Dr. J. H. Salisbury, Chemist to the State Agricultural Society of New York, presented an analysis of the water melon, and muskmelon, with full details of the various elements which enter into their organization. Both have marked quantities of phosphoric acid and soda, with lime, carbonic acid, and chlorine. Other elements occur in smaller proportions. It results from these analyses that animal matter, or bones and flesh,

also ashes and salt, are proper manures for these melons. The analysis both of soils and the plants they are intended to produce cannot be too much insisted upon, for although the theories founded upon such analyses may be at times erroneous, the facts remain from which more accurate theories and a more correct practice may be based.

An interesting essay was read by Dr. J. L. LeConte of New York, recently returned from California, on the geographical distribution of animals in that country.

Professor E. N. Horsford, of Cambridge, (Massachusetts), read a valuable chemical paper on the Solidification of the rocks of the Florida reefs.

Professor W. Hackley, of Columbia College, N. Y. presented his mathematical investigations on the proper Geometrical form of the *Mouldboard of the Plow*, one of the results of which is the necessity for a long share.

Whilst the mere mechanical vanity of this country received a deserved check at the World's fair; we find that wherever *mind* and *science* were concerned, America could compete on equal terms with any part of the world. Another example of this truth was given at the Albany meeting where the Committee on microscopes decided that Spencer's American instruments were not excelled by those of any European constructor, although the demand which the extension of microscopic science has made for instruments of the very best kind, has called much mathematical and mechanical talent into this branch of manufacture.

Whilst in Albany we visited the rooms of the State Agricultural Society, where there is a good display of implements, including materials for a history of the plow, such as old forms which, if not thus preserved will not be known in future generations.—Some of these are very curious, as the awkward two wheel plow used in Canada.

PEOPLE *too proud to work* are much rarer than those who are *too lazy*.

Milk and its management.

Here are some wholesome suggestions in regard to milking and the management of milk, in the dairy, which we condense from an English work on the subject.

The operation of milking should be performed gently, not harshly. If harshly performed it becomes painful to the cow, who not unfrequently brings into action her faculty of retaining her milk at pleasure. When gently performed, milking generally gives pleasure to the cow. Many instances are recorded where cows which would not let down a single drop of milk to one dairy maid, would let it flow in abundance whenever another approached them.

Cows that are ticklish or skittish should always be treated with the utmost gentleness, and when the udder is hard and painful, it should be tenderly fomented with luke-warm water and softly rubbed. Such treatment will bring the cow into good temper, and induce her to yield her milk freely.

Whenever a cow's teats becomes scratched or wounded, so as to produce foul milk, such milk should on no account be mixed with the sweet milk, but be given to the pigs without being carried to the milk house, lest its presence there should taint the atmosphere and prove injurious to the other milk.

It is well to comb and curry cows as it promotes cleanliness. The fact is, where clean milk is an object, the comb and brush, together with the thorough washing of the udder are indispensable.

Snuff-takers and slovens should never be permitted to assist about the dairy, nor should the milkers be permitted to enter it with a dirty apron covered with hairs from the cow house.

1. Of the milk from any cow at one time, that part which comes off the first is always thinner, and of a much worse quality for making butter, than that afterwards obtained; and this richness continues to increase progressively to the very last drop that can be obtained.

2. If milk be put into a dish, and allowed to stand till it throws up cream, the portion of cream rising first to the surface is richer in quality, and greater in quantity, than that which rises in a second equal space of time; and the cream which rises in the second interval of time is greater in quantity, and richer in quality than that which rises in a third equal space of time; that of the third is greater than that of the fourth, and so of the rest; the cream that rises continuing progressively to decrease in quantity, and to decline in quantity, so long as any rises to the surface.

3. Thick milk always throws up a much smaller proportion of the cream which it actually contains than milk that is thinner; but the cream is of a richer quality; and if water be added to that thick milk, it will afford a considerably greater quantity of cream, and consequently more butter than it would have done if allowed to remain pure; but its quality is, at the same time, greatly debased.

4. Milk, which is put into a bucket or other proper vessel, and carried in it to a considerable distance, so as to be much agitated, and in part cooled before

it is put into the milk-pans to settle for cream, never throws up so much, or so rich cream, as if the same milk had been put into the milk-pans directly after it was milked.

From these fundamental facts, the reflecting dairyist will derive many important practical rules. Some of these we shall enumerate, and leave the rest to be discovered. Cows should be milked as near the dairy as possible, in order to prevent the necessity of carrying and cooling the milk before it is put into the creaming dishes. Every cow's milk should be kept separate till the peculiar properties of each is so well known as to admit of their being classed, when those that are most nearly allied may be mixed together. When it is intended to make butter of a very fine quality, reject entirely the milk of all those cows which yield cream of a bad quality, and also keep the milk that is first drawn from the cow at each milking entirely separate from that which is last obtained, as the quality of the butter must otherwise be greatly debased without materially augmenting its quantity. For the same purpose, take only the cream that is first separated from the first drawn milk. Butter of the best quality can only be economically made in those dairies where cheese is also made; because in them the best part of each cow's milk can be set apart for throwing up cream, the best part of this cream can be taken in order to be made into butter, and the remainder, or all the rest of the milk and cream of the dairy, can be turned into cheese. The spontaneous separation of cream, and the production of butter, are never effected but in consequence of the production of acid in the milk. Hence it is that where the whole milk is set apart for the separation of cream, and the whole of the cream is separated, the milk must necessarily have turned sour before it is made into cheese; and no very excellent cheese can be made from milk which has once attained that state.

EASTERN VIRGINIA.—Nowhere has the farming interest advanced with more rapidity than it has of late years in the Tidewater District of Virginia. It was stated by a gentleman from Lancaster county, the other day, that there was annually more than double the quantity of wheat now sown in his district than was reaped in his district twenty years ago. Another large proprietor stated that he had realised upwards of fifteen per cent. on his investment in land cultivated in wheat. This change has been brought about by the discovery and application of marl, inexhaustible in that quarter, and the free use of guano, —one farmer in Westmoreland, we learn, having last year applied twenty tons of that manure with striking effect, in the improvements of his lands.—*Winchester Virginian.*

AGRICULTURE in this country is a highly respectable, and at the same time a most attractive pursuit. It is not only resorted to as a means of acquiring an honest independence, but as a dignified and pleasurable occupation by men of science and letters, by statesmen and warriors, merchants and navigators—in short, by all who have wealth, honor, and distinction in other pursuits of life.—*Senator S. A. Douglass.*

Communications.

TRANSLATED FOR THE FARM JOURNAL.

Agricultural Chemistry, No. 3.

5) *Potassium.* This is the metallic base of common potash. It does not exist pure in nature, but is frequently met with in combination with a salt. In the form of a chloride, it is found in small quantity in sea water, more abundantly in the ashes of most plants, and frequently in the soil. It is one of the principal constituents of felspar, by the decomposition of which soils are supplied with it, whence it is taken up by growing plants. Soils contain it in the form of silicates, carbonates, muriates, nitrates and phosphates; and in vegetables it is usually found as a carbonate, phosphate, sulphate, or nitrate. Potash is an indispensable element of vegetables. Of the cultivated plants, potatoes, turnips, rape, maize, clover, lucerne, esparcette, beans, peas, vetches, and buckwheat, require liberal supplies of it; and so likewise, among forest trees, do the elm, the beech, the ash, the hornbeam, the linden, and the willow.

6) *Sodium.* This is never found free, but occurs plentifully in nature, in various combinations. As chloride of sodium it exists abundantly in sea water, from which it is obtained by evaporation as common sea salt. It is also found in masses or beds, as rock salt, at considerable depth in the earth, in various countries. Sodium in combination with oxygen forms common soda, which has a powerful affinity for acid. We may properly infer that soda is indispensably required by plants, and we find it in the ashes of most of them; and many will thrive well only in soils containing it in abundance—such as the *Salicornia* and *Salsola*, the *Glaux maritima*, the *Pod maritima*, &c.; and hence those plants are found only in the vicinity of salt springs and on the seacoast. Of the inland plants, those which are very nutritious—such as the dandelion, the clovers, lucerne, esparcette, and the cabbages—are found to contain much soda, and doubtless owe their great nutrimental value to that circumstance. Such plants are not only devoured greedily by cattle, but are highly conducive to health and the production of fat.

7) *Calcium.* This is a silver-white metal, which by union with oxygen, forms lime. It is not found in an uncombined state, but in its various combinations is of the greatest importance in practical agriculture. Calcareous earth combined with carbonic acid, constitutes common limestone and marble; with sulphuric acid, it forms gypsum; and in combination with phosphoric acid, it is found in several minerals—such as apatite and phosphorite—in marls, in soils, and in bones of animals. It is also found combined with silicic acid, not only in minerals, but in the soil and marls of alluvial districts; and the ashes of many plants contain it in excess, in combination either with phosphoric, sulphuric, silicic, or carbonic acid.—

It is a well ascertained fact that calcareous earth, is indispensably necessary for the growth and due development of nearly all plants; but great diversity of opinion prevails as to the proportional quantity which soils should contain to be very fertile. From three to four per cent. is the usually assumed proportion, through Sprengel states that most of the soils celebrated for their productiveness, which were analyzed by him, contained only one-half of one per cent. But he found the calcareous earth in these invariably in combination with substances which rendered it readily soluble and thus facilitated its absorption and assimilation by the plants. But in such cases a rapid diminution of the quantity of lime in the soil followed the cultivation of crops; because, in addition to what was taken up by the plants, much was leached out and carried off by rain water. Sulphate of lime is present in many soils, and is found in the ashes of many cultivated plants. It is employed, in the state of powder, as a means of increasing the fertility of land, and is found to promote the growth of those plants especially which require both lime and sulphur. Spring water containing it, may be advantageously applied for the irrigation of meadows.

8) *Aluminum.* This is the basis of clay, which is very abundant in nature and forms a large portion of the crust of the globe. Though belonging to their chemical constituents, plants contain only a very small quantity of aluminous earth. Soils which contain a large portion of it are difficult to work; and the most fertile soils usually contain comparatively little of it—not exceeding from two to four per cent.

9) *Iron.* In its combination with oxygen, this substance exerts a very important influence on vegetable life; and in this state it exists abundantly in nature. The first, or protoxid is rarely found in soils, except in combination with an acid. The second, or peroxid, is much more common, and imparts the reddish color observable in many soils.

10) *Manganese.* This is a metal, but is never found in a pure state, being always in combination with oxygen or sulphur. As it is found in almost all parts, it seems essential to their growth. But it is not yet ascertained whether it acts on them directly, *per se*, or whether it is absorbed, merely in consequence of its intimate connection with iron, of which it is a faithful associate.

From the foregoing enumeration, it is obvious that very few of these simple substances occur naturally in a pure state, but are found in various combinations and forms, in the soil. The chief cause of these combinations appears to be in the powerful tendency of oxygen to unite with the several elements,—though there are some combinations in which oxygen bears no part. Furthermore, oxygen is present in very different proportions in most of those combinations; and thus numerous bodies possessing various properties are produced. When oxygen unites with another

body in any small quantity, the result is called a *peroxid*, being an imperfect oxid, in which the peculiar qualities of substance which the oxygen unites with are still largely predominant. But if the quantity of oxygen be so large that a kind of mutual saturation takes place, the resulting combination is called a *protoxid*. In these the peculiar qualities or properties of both substances are totally changed.—When the quantity of oxygen absorbed is in excess the combination is termed a *hyperoxid*, which possesses properties more closely approximating those of oxygen. But if the oxygen predominate so greatly that the combinations become acid, and act corrosively when in a concentrated form, they are termed *acids*. But all bodies do not absorb oxygen in such quantity as to become acid. Of the simple substances, carbon, sulphur, phosphorus, and silicon alone do so; others, such as potassium, sodium, calcium, magnesium, aluminum, iron and manganese, will take up only so much oxygen as suffices to form oxids. But these oxids, again, possess the property of uniting with the oxids of the first mentioned class, and the resulting combinations are termed *salts*. Other substances, however, may also form salts. All the various acids do not possess the same degree of affinity for the several elements, uniting more readily with some than with others, as though more closely related to some than to others. This affinity extends so far, that when acid has taken a particular substance, and then meets another for which it has a stronger attraction, it will forsake the former and combine with the latter. The oxid which, by combination with an acid, forms a salt, is called the *base*. *Basic bodies*, accordingly, are oxids, whilst their counterparts are acids.

An old farmer's method of planting Corn.

MR. EDITOR.—Although not the season for corn planting, I give you herewith an account of the plan which I always pursue, and after an experience of nearly forty-eight years, have found under all circumstances to produce the best crops. Many year's observation, has satisfied me of the fact, that my system will answer as well as any other in favorable seasons, and far better during such an one as that just passed.

I always make it a point, when practicable, to put corn on sod ground, which *may* be plowed in the fall, and with excellent effect, but which *should be*, at the earliest possible period in the spring. I always plow eight inches in depth, then score out my ground very deep, leaving the distance between the furrows three feet. The corn is then dropped, single grains, twelve inches apart. Where the ground is strong, the distance may be less. My ten-toothed harrow is next brought into play, being fashioned as follows: fourteen inches in width in front, and eight inches behind. This is carefully drawn through the furrow,

thinly covering the corn, and the field permitted to lie in this condition for six or seven days, when, with my twelve-toothed harrow I go over the whole, most thoroughly, covering the corn. The effect of this last harrowing is to retard somewhat the first appearance of the corn, (which, by the way is not an objection,) and to keep down the weeds and grass. When about four inches high, I go through the furrows lengthwise with a shovel harrow, which is another deathblow to the weeds and grass, and when it has reached the height of twelve inches I give it another and final dressing with one of Ilarnley's corn plows. This last dressing effectually destroys the weeds and leaves the ground in a fine mellow condition.

The advantages I claim for this method are these:

First, the deep plowing gives the roots of the corn a fine chance to penetrate the soil to a considerable depth, in search of suitable food. The depth which they reach, secures them in a great measure against the effects usually produced by drought. A second good result of the deep plowing is, that in very wet seasons, the over-moisture will affect the young corn less than where the plowing is shallow, because, not being obstructed at a depth of four or five inches by the hard pan beneath, it has a chance to sink several inches lower.

Secondly. The heavy harrowing, after the corn has been six or eight days planted, completely exposes to the sun and air, the seeds of weed and grass which have commenced germinating, and either kills them completely, or so injures them, that their future growth and vigor is retarded so much as to place them completely at the mercy of the shovel harrow and corn plow, with which the after dressings are given. Again, the last dressing with the corn plow keeps the mellow earth around the stalk, and in most cases the result is, a second set of roots which give increased vigor to the growing stalk and ear.

By the plan above detailed I have rarely, if ever, failed to have an average crop, even in the most unfavorable seasons, and when the seasons have been good, I have been led to think the yield to be fully equal to any of my neighbors.

As before remarked, this article may be somewhat out of season; but as the long evenings are approaching, some of your readers, who may think it worth their while to test my plan, will have an excellent opportunity of reading and reflecting upon the subject, before plowing time arrives.

CHRISTIAN STOUFFER.

Pine Farm, Manheim tp., Lancaster co.

THE modes of sowing barley are either broad-cast or in rows by the drill or ribbing. The broad-cast mode is almost universally adopted; unless in lands much infested with annual weeds, where drilling and hand-hoeing, and in particular cases horse-hoeing, may be employed to advantage.

Lime.

MR. EDITOR.—It is a source of satisfaction to observe the increased attention paid to lime as a fertilizer. Notwithstanding the persevering efforts of interested persons to press upon the farmers the extensive use of guano, and other highly vaunted manures, it is apparent that the common sense of the community is fast triumphing over these labored efforts, and our own native fertilizers adopted to a much greater extent than heretofore.

As a manure, lime undoubtedly deserves to be classed amongst the best, not only on account of the permanent fertility it imparts to most soils, but also from its abundance and cheapness. It is a well established fact, that guano, while it rapidly imparts a high fertility to many soils, loses its virtues in a comparatively short period; thus rendering its frequent repetition necessary. This involves an expense which the generality of farmer's receipts will never justify, hence its universal adoption, at once becomes impracticable. Lime, on the other hand, is not only cheaper, but when once applied in the requisite quantity, many years elapse before another application is needed.

Chemical analysis has satisfactorily shown, that lime exists in combination with an acid, in nearly all plants, it therefore becomes an almost indispensable ingredient of the food which should be supplied to them. There are also but few soils of which it does not form a part, and for this reason its adaptability to the general uses of farming is greater than that of any other manure—that of the farm yard excepted. Wherever, I believe, the presence of lime has not been detected in greater or smaller proportions, there the soil has been found unfit for cultivation.

However, notwithstanding the almost universal adaptability of lime to farming purposes, it is apparent that its true value as a fertilizer is but imperfectly understood. Farmers are frequently met with, whose experience with it has been anything else than satisfactory. If, however, inquiry is made, it will be found that where it has failed to accomplish the desired purposes, it has been the fault of the farmer and not of the lime. The general and very correct impression, that it is useful upon nearly every kind of soil, has led many to err in its application, they supposing that all soils require it in equal quantities. Writers upon the subject, pretend to fix the precise quantity requisite for an acre, and following these wise prescriptions, many persons apply it in the same quantities to every variety of soil. Than this, there could not be a more pernicious evil in farming.

The quantity of lime to be used on an acre of ground should of course vary with the character of the soil. As one of its principal virtues consists in its action upon organic substances; that soil will of course bear it in the largest quantities where animal and vegeta-

ble remains most largely abound. Again, as lime is most frequently deemed necessary, by the inexperienced, where there is, to a considerable degree, an absence of organic matter, the consequence is, that it is frequently applied in too large quantities, to do aught else than absolute harm, and the experimenter turns from it with disappointment and dissatisfaction.

If more pains were taken to inculcate proper ideas in regard to the use of lime as a fertilizer—if, instead of writers, lauding its general adaptation to all soils, and in just such quantities as the farmer's means will admit of, they would be particularly careful to point out the character of the soils and the quantity in which it should be applied to each, we should soon find it growing into favor, and our farmers reaping the benefits of its virtues.

I have penned the above, Mr. Editor, hoping that it will be the means of drawing abler pens than mine to this important subject. If your correspondent P. S. L.'s views in relation to the deterioration of the soil of Pennsylvania be correct, it is high time to look around us, and see what means are within our reach to arrest the evil. There are doubtless many, but it appears to me that there is no one so thoroughly available as the judicious use of lime, and as our coal regions are being intersected at every point by rail roads, and as limestone exists in inexhaustible quantities in a large portion of our State, the use of lime will, in a few years, be brought within the reach of the generality of farmers. Let us, therefore, understand its use perfectly, in advance.

ENOCH LEWIS.

Luzerne county, Penna.

A Practical Farmer's testimony in behalf of deep plowing.

MR. EDITOR:—In travelling through various sections of Pennsylvania, my attention has been arrested by the very shallow plowing done by most farmers. This reprehensible practice prevails to as great an extent in counties where the soil admits of plowing to the depth of seven or eight inches, as in those where it is thin and poor; and it appears to me that it is the result not so much of a desire to evade the difference in the amount of labor as of an ignorance of the immense value of deep plowing.

I am a plain farmer, pretending to no scientific knowledge, although I have the advantage of some forty years practical experience. I will not, therefore, attempt to give you any scientific reasons for my strong faith in deep plowing, but will call your attention to a few facts which speak more loudly to the minds of practical men than scientific theories.

In the year 1847, I purchased the farm on which I now reside. The condition of it at the time of purchase was most wretched. Fences were torn down, the house was fast going to decay, and the barn and outbuildings too bad to shelter stock or protect produce from the weather. The land was in worse con-

dition still. For years it had been rented out, and as is usually the case with tenants, every thing was taken from the soil which it would yield, and when at length it was worn out completely, it was turned out, like an old horse to die.

The land was originally as fine as any in Lancaster county, a fact of which I was fully aware. I had for years observed the mode of plowing adopted by the tenants, and felt satisfied that one of the principal causes of the wretched condition of the farm was the "skinning" system pursued by them. My first step, therefore, was to remedy this evil. My horses being of the kind familiarly known as the "Conestogos" and my plows, those manufactured in our own county, (which, for adaptation to heavy soil are the best I know of,) I commenced the work of renovation. A good motto for every farmer is, "go to the bottom of things." I determined to follow it and went to the bottom of the soil on my farm. It was hard work, and my "Conestogo team" felt it. But I fed well, and continued the undertaking. Everywhere was plowed to the depth of eight inches, and soil was brought to the light and air which had not seen either for a quarter of a century. Some of my neighbors looked in upon me and nearly all predicted that I would get tired before I was done. This, however, did not discourage me. I persevered until the whole was completed, applying to the land all the farm yard manure I could gather, and when that failed, putting on lime.

What was the result? The result was that the first crops of wheat and corn were treble the quantity of those taken from the farm when under lease. I had nearly thirty bushels of first rate wheat to the acre, which was as good a yield as that of any of my neighbors farms. A field from which, all told, six small two horse loads of hay had been gathered; two years after yielded me thirty-nine larger loads. My corn was good and I was satisfied with the result of my experiment.

As my means of feeding stock multiplied, I increased the number, so that my manure heap grew in size and value. The deep plowing was persisted in, and with this gratifying fact accompanying it, that where I with difficulty plowed to a depth of eight inches before, I could now plow to the same depth with as much ease as my neighbors could to a depth of five inches. This was another spoke in my wheel and my neighbors began to see it. I was pleased to observe that several of them set their plows a little deeper, and that the benefits of giving the sub-soil a chance to speak, were beginning to be appreciated.

During the past season I have had my faith in deep plowing greatly strengthened. While many farmers complain of considerably less than an average crop of corn, mine has never been better. During the drought, when in other fields the corn looked sickly

and yellow, mine grew strong and vigorous, and throughout the season retained a rich green color.

Now, Mr. Editor, while I give the lime and manure, I have applied to my farm, all the credit they deserve, I attribute its present good condition mainly to deep plowing, and in concluding this plain statement of facts, permit me to say to farmers every where, that the first plowing is the only one that need be looked upon with dread. When once the soil is loosened thoroughly to the depth of eight inches, it can be kept loose with very little more labor than where the average depth of plowing is five inches. And I am fully convinced of the fact that were the labor double that of shallow plowing, it will pay better to go to the bottom, every year, than merely to "skin" the surface.

AN OLD FARMER.

Manor township, Lancaster co.

Late Seeding.

MR. EDITOR.—The calamitous effects of blight in our grain crops some ten or twelve years back, led subsequently to early seeding, which in general is the safest practice, although not a specific against blight; for I have frequently seen blighted wheat which had been sown early. There are, and ever will be cases of blighted grain, arising from causes other than late seeding, which the want of time will not permit me to enter upon now, but hope to be able at some future time to explain. My object at present is to say a few words on the necessity there will be to guard against the "wintering out," as it is termed, of the forthcoming crop, and to secure against blight, as under the circumstance of late seeding.—The prevailing drought pending the present seed time producing a condition of things tantamount to late sowing, will require some additional attention on the part of farmers, in order to secure the young grain and grass, feeble and exposed as they will be, from the freezing and thawing of the coming winter.

At this date, last season, most of the grain crops looked so luxuriant and so much in advance of the season, that fears were entertained by many, that so premature a growth would injuriously affect the crop by smothering it under the snow, or in promoting the increase of the fly from the congenial shelter it would afford for its propagation; and hence some resorted to depasturing, and not a few to mowing, to provide against the apprehended contingencies. The case is widely different now, as many of the grain fields look as if left to fallow unsown. The seed if germinated, has sent forth but feeble plants, having but little hold in the ground, and should November be even so favorable as common, still the young grain can make but little progress in root or blade, to fit it to withstand the severity and changes of the winter.

The question then is, how can the danger be averted or the evil modified? I answer, through a judicious

top-dressing by way of sheltering and protecting the tender blades and rootlets from the intense frosts and relaxing thaws of the approaching season, and to quicken them into action so soon as the earliest breath of spring breathes upon them, so as by rapid growth they make up for their backwardness in the fall, and mature in season to escape blight. To this end I recommend a top dressing of unrotted litter, forked from the barn yard and stable manure, to be carted on and spread evenly and lightly over the grain, so soon after the first frost shall have frozen the ground sufficiently hard to prevent the wheels from cutting into it. The first rain or snow afterward will flatten it down, close over and around the roots, protecting them in a great degree from the intensity of succeeding frosts, and affording to them invigorating warmth and nourishment for an early start in the spring.—If the ground has been well manured previous to seeding, care must be taken to carry out as little of the short dung with the litter as possible; this can easily be managed by shaking off extraneous matter in forking. If sufficient litter is not at hand, at first, to topdress the whole, whatever accumulates afterwards should occasionally be spread through the early part of the winter, as opportunity may occur, until all the grain has been dressed. The short straw frequently left in the barn yard from the threshing machine, though not saturated by the cattle or horses, may, if early applied, prove highly advantageous. Let no one be deterred from applying the litter or straw upon their grain fields through fear of encouraging the fly, or be so solicitous as to the appearance of the litter, when dry, in spring, will present, for the young wheat and grass plants will soon push through it, and it will in a short time sink to the surface as it becomes moistened with the dew and rain, and will moreover, exert a beneficial influence on the wheat, and insure well set grass in the stubble when the grain is reaped.

Permit me to add, that experience in top dressing late sown grain, qualify me to bear testimony in favor of its great utility. I have practised it every year on grain sown on potato land, which from the lateness of the seeding, caused by the delay in gathering the potato crop, rendered the practice of top dressing, in my judgment, indispensable. Through a series of years I never failed in reaping a first rate crop of wheat under this practice. In 1842 I gathered over 440 bushels of fine Mercer potatoes to the acre, field culture, and actually reaped the next harvest, from the same land, quite fifty bushels of white wheat to the acre: the seed of which I had from my esteemed friend, Capt. John Steele, of Paradise, Lancaster county. Last harvest, of wheat so treated, top dressed, I must from appearance have reaped not less than forty bushels to the acre from three to four acres of land, from which a crop of potatoes had been gathered the previous season. Many I fear will

think the practice here recommended too troublesome. To such I take leave to say, they should not hesitate to take a little additional pains to secure a remunerating crop for the labor already bestowed upon it, which present appearance, without some further effort may prove labor lost. A poor crop of grain at harvest, with badly set grass, are circumstances that every farmer must deprecate. What prudent man but would give a trifle to insure that which might be deemed at risk or in jeopardy.

Respectfully,
Mount Airy, Oct. 16, 1851.

JAMES GOWEN.

Agriculture in Pennsylvania.

MR. EDITOR:—Much has been said of late about the agricultural progress and standing of Pennsylvania, and comparisons have been drawn between her and other members of the Union, rather derogatory to our own State.

Now, Mr. Editor, I have repeatedly contended that Pennsylvania is in advance of other States, in agricultural improvement,—at least in the cultivation of the soil and the condition of farms generally.

In riding along our railroads, turnpikes, and public avenues, these facts must be evident to those who have traversed ours and other States sufficiently to institute a comparison. They will see in Pennsylvania finer fields, cleaner and more completely tilled; fences of better style and in neater condition; the system of rotation more closely observed and practised; the returns of field crops equal to, if not exceeding, generally, those of other States, while our farm buildings, at least our barns and stabling, are greatly superior to those seen elsewhere.

Having said thus much for our fields and our farms, the superiority of which I think should be conceded, it may be well to turn for a moment to the other side of the picture and note the “short comings” and deficiencies of our good citizens. When our farmers visit the agricultural shows and fairs of the Eastern States (which they do quite too rarely) surprise is excited at the great display made by districts that appear inferior to their own, in the means of producing, whether of quality or kind, the variety concentrated in their show grounds. The surprise is still greater when on visiting the best markets north and east of us, they are not found to equal our own, and especially that of Philadelphia.

What, then, is the reason, that they so far excel us in the annual display of their agricultural products?

Several causes may be assigned for this, in some respects real, in others apparent superiority. Notwithstanding we have more highly cultivated farms, and finer barns, affording more abundant food and better shelter, with a climate unsurpassed for the rearing of stock, our cattle, horses, sheep and swine are in the aggregate inferior to those of New York and the New England States. In the breeding of

stock with very few exceptions our farmers are exceedingly deficient; and equally so in orchard fruits of nearly all descriptions. We should seek for better kinds, and when we have them should make it known by bringing them out on public occasions as do our eastern neighbors.

Even this inferiority of stock is overcome by the fruitfulness of our soil and the skill of our graziers as is shown by our unrivalled shambles, while the butter, the milk, the field vegetables and the finer products of the garden have given to the markets of Philadelphia a high reputation the wide world over.

Now, with the advantage of a fine climate and our superior farms which pour their wealth so profusely into the pockets of our hardy yeomen, why is it that we fail in some important particulars? Is it not mainly owing to the want of that free and social intercourse which distinguishes the citizens of the northern and eastern States.

Unlike them, our farmers are reserved and recluse in their manners and habits; they seldom mingle together in societies or associations, and of course have not the benefit resulting from frequent interchange of opinions. Some of the happy results of assembling together for discussion and social conversation, are the desire given to communicate knowledge; the information imparted or received; gradually acquiring the means of communicating our ideas and thoughts to others, and in a word rapidly promoting the habit of inquiring, reasoning, *thinking*—that *thinking* which gives to the yankee his cuteness, or rather his great intelligence.

In travelling through a rough and poor district of Massachusetts where the people might starve if they depended on the soil alone for sustenance, but where their houses and homes looked comfortable, I was asked by a fellow passenger what they lived upon. The very natural reply suggested itself to my mind that "they lived upon their wits."

These people owe their wit as we call it, or the knowledge by which they live and prosper where others would starve, to attendance in the first place at their excellent public schools, and then by becoming members of agricultural and other societies, and by reading books which treat on the business and pursuits of life. It does not take such men long to understand that a good horse or cow or sheep costs no more to raise than one of inferior kind, while it will when ready for market sell higher, and they therefore seek for the best. If we can induce our Pennsylvania farmers to form in every neighborhood agricultural societies or clubs and especially to subscribe for and read such works as the Pa. Farm Journal they would not be long in discovering wherein there is room to improve their condition and prospects.

Our fine fields would never be covered with "mountain scrubs" when a better race could be

found, and our farm stock like our crops would vie with the best of any land. Farming implements would by the same means be improved even beyond their present high standard and the character of Pennsylvania as an agricultural State of the first order would be sustained and promoted.

Phila., Oct. 18, 1851.

A. S. ROBERTS.

How should young farmers spend their winter evenings.

Winter is approaching.—the long evenings are at hand, and the holiday of the farmer is near. Young man, you, I mean, who purpose devoting your life to agricultural pursuits, have you determined upon any plan of spending your winter evenings? If you have not, let me suggest one.

Are you familiar with the great principles upon which the noble science to which you purpose devoting your life, is based? Perhaps you will answer, yes; but before you do so, pause a moment and reflect. I do not desire to know whether you can plow, or reap or mow, or perform any or all of the duties of the farm; but whether you are conversant with those broad principles which lie at the foundation of agriculture, and without a knowledge of which you can never become a true farmer? Or, to make matters plain, if not familiar with them, are you endeavoring to become so? If you are not, you have an important duty to perform—a duty you owe to yourself and your profession; and that is, an immediate attention to those branches of study, which if pursued with a proper spirit, will make you a better farmer, and a wiser and happier man.

The long winter evenings are approaching, and delightful evenings they will be, if properly improved. You are probably aware that chemistry is the foundation stone of agriculture. It performs an important part in almost every process in which you engage, and it enables you to understand the various uses of the materials you work with, or produce.—A thorough knowledge of agricultural chemistry, will assist you in overcoming the host of difficulties that stand in the way of the mere working farmer. It will teach you the character and requirements of your soils—the proper application of manures—the most economical mode of feeding your stock—the management of your dairy—the true value of the crops you grow; in fact it is the only thing that can enable you to know to a positive certainty, whether the system of farming you are pursuing is the most economical, as well as the most profitable. I might cite a thousand instances in which chemistry has removed misapprehensions, and dispelled erroneous theories; this however, is not necessary. If you have an earnest desire to become a thorough farmer, a bare reference to the advantages to be derived from even a partial knowledge of it will be sufficient.

Now for my plan. Procure a copy of Liebig's Agricultural Chemistry, and if you can afford it, get

Johnson's too. Determine to give two hours at least of each evening to the study of them, and make it an unalterable rule to fix in your mind at least *one important truth every evening*. Persevere a few weeks, and as one great truth is added to another, you will be surprised at the growing interest that is awakening within you. Thus continually and steadily advance in your studies, and by the time spring arrives, and you are prepared to resume your out-door work, you will have laid up such stores of knowledge as will not only repay you for the mental labor you have undergone, but your daily toil, instead of being drudgery, will become a source of delightful interest to you. You will work more intelligently and consequently more advantageously. Understanding the character of the soil you cultivate, the manures you apply and the crops you grow, you will be enabled to adapt one to the other and thus produce the most desirable results, with the least possible expense.

In mentioning Johnson and Liebig only, do not suppose that I wished to convey the idea that their works should alone engage your attention. There are many others, on subjects intimately allied to agriculture, which should also be attentively studied, and which your own taste and judgment will enable you to select. But remember this one fact; if you desire to build up a reputation for being a true scientific practical farmer, agricultural chemistry must be the corner stone of the structure you wish to raise.—Without it you may farm, and farm successfully, but your labor will not be intelligent labor. With it, your toil will be lessened in fact, while the consciousness that you understand the various processes that engage your attention, will lend to it a charm that will beguile many an otherwise tedious hour, and lead you step by step, deeper into those glorious mysteries of nature's workings, that are a "sealed book" to the uniformed. Young man, how will you spend the long winter evenings?

FRANKLIN.

Harrisburg, Oct. 9, 1851.

MR. EDITOR:—Some time since I purchased a cow, which, at the time of purchase, was very thin in flesh. She gave a large quantity of milk, and I was led to believe that with careful feeding I could soon improve her appearance. But my hopes have been vain.—She eats freely and gets as much as she can eat, but she will not fatten. The amount of milk has also increased very perceptibly, but not the flesh. Can you account for this?

J. S.

Mechanicsburg, Cumberland county.

[ANSWER.—Good milkers are rarely ever full fleshed. The curd and butter of milk are formed from the same material as the fat and muscle of the cow, consequently, so long as she continues to yield a large quantity of milk, she will not become fatter.—Whenever the cow begins to fatten her milk falls off in quantity.

DEAR SIR:—Agreeably to promise I send herewith a small sample of wheat grown by me this season.—I procured the seed from the Wabash valley, Cass county, Indiana—and quote the words of a letter from the friend to whose kindly office I am indebted for the seed. "The wheat was raised on the barrens or oak openings, and yields, with western farming, thirty to thirty-five bushels per acre. The seed was originally sent in a letter from the Baltic, weighs sixty-four pounds to the bushel, and is considered the best in the country—commanding \$1 per bushel for seed."

I sowed the three bushels of seed on an acre and a half of ground which had been in potatoes, they having been sowed in the sod well manured with barn yard manure. The yield was fifty-two bushels.

Owing to the delay in forwarding the seed it was not sowed until the 11th of October and was harvested on the 8th of July—one day after a field of Mediterranean wheat sowed on the 13th of September.—It is a white beardless variety—bearing a full head not so long as the Mediterranean but equal in bulk upon a remarkably stiff straw, much the color of bright bamboo.

Upon the 30th ultimo I seeded twelve acres with this wheat, having manured the oats stubble freely with barn yard manure, plowed three times, sowed broadcast two bushels to the acre and harrowed in.

It will afford me pleasure to communicate the result at the proper season.

From the very gratifying success of the first sowing I am encouraged to hope this may prove what we so much desire in this region, an early white wheat.

I intend having the ground accurately surveyed and the return of the miller to whom the crop was sold.

Very respectfully,

Your obedient servant,

JAS. A. McCREA, M. D.

Whitemarsh, Montgomery county, Oct. 9, 1851.

TO MEASURE AN ACRE OF GROUND.—In measuring land, 30 $\frac{1}{2}$ square yards make one square rod, and 40 square rods make one square rood, four of which, or 160 rods, make one acre. It is evident, therefore, that 40 rods long by 4 rods wide will make an acre. The same result may be arrived at by measuring 299 feet in length, and 198 feet in width, or by measuring 73 $\frac{1}{2}$ yards in length, by 66 yards in breadth. To lay out an acre *square*, 209 feet on each side is the nearest amount that will make an acre, being less than an inch each way over the *exact* distance; 43 560 superficial feet, or 208 95—100 feet on each side constitute an acre of ground.

AN Englishman observed a stone roll down a staircase. It bumped on every stair till it came to the bottom; there, of course, it rested. "That stone," said he, "resembles the national debt of my country; it has bumped on every grade of the community, but its weight rests on the lowest."

Propagation of the vine.

(Continued from page 209.)

Some cultivators take single eyes with about half an inch of the wood above and below, rounding off both ends somewhat, and place them in a hoisted or in pots, horizontally, so as to leave the apex of the bud or eye even with the surface of the soil—covering the whole slightly with moss, which is to be kept moderately moist.

In connection with the preceding, Mr. Matlack gives his system of pruning or dressing, based on the physiology of the vine; which being an essential part of the after culture, deserves to be quoted in his own language.

“Every joint of a grape vine has its own separate pith. This most important circumstance commences at the lowest leaf that has a clasper opposite. A solid woody substance, passing from the leaf to the clasper, through the vine, and connecting them together, cut off entirely the communication between the pith of the joint below and that of the joint next above; and so on upwards at every joint throughout the whole length of the vine. In the after stages of the growth of the vine, this takes place also where the first branch of grapes stands opposite to a leaf—the bunches never failing to stand below all the clasps, which are indeed barren fruit stems, whose chief office is to support the vine and the clusters below them. It is important to be known and kept in mind, that all the eyes below the first clasper are formed in the bosom of smaller and more feeble leaves: and that the base of these eyes does not extend across the vine so as entirely to cut off the pith of the joint below from connection with that of the joint next above it. These eyes are therefore imperfect, and whenever you trim the vine ought to be rubbed off.

“It is at the first trimming of a vine grown from a cutting, that we begin to apply the principle here laid down; and it is only on this occasion that there can be any difficulty in the application of it. This difficulty can only arise when the growth of the vine has been so feeble, as not to have produced a clasper in any part of it. This seldom occurs, but if it should happen, the vine must be cut off at half an inch above the lowest strong full eye; otherwise it is to be cut off at half an inch above the first clasper; and in both cases, all the eyes below are to be carefully cut off.

“The eye thus left will sometimes produce more than one shoot, in which case all but the strongest should be rubbed off, and that supported and protected. This, except the keeping the ground free from weeds, is all the care required this year.

“In the following February the vine is to be again cut off just above the second clasper from below; that is leaving on two eyes to grow this season, and rubbing off all the eyes below the lowest clasper. Both these shoots should be permitted to grow to their ut-

most extent—which, if the soil be favorable, will be very considerable; and there will be reason to hope for fruit the next season.

“The lower clasper issues higher up on some kinds of vine than on others. On some it appears at the third leaf, on some at the fourth, and on some kinds as high up as at the fifth leaf. But the same rule is to be applied to all; and every eye below the lowest clasper is to be rubbed off.

“In the third February, three eyes may be left on each shoot; but not more, however strong the shoots may appear to be. From this time forward all the side branches from the shoots of the year are to be rubbed off, taking care not to injure the leaf from which they spring, which is the nurse of the bud at the base of the stem.

“At the fourth time of dressing the vine, and from that time forward, it may be cut from about the end of October to the middle of February. Four eyes may be left on each shoot at this time; and five eyes may be left on each at the fifth dressing. But more than five eyes should never be left on a shoot even of the most vigorous growth, at any age of the vine; for however pleasing the increase for the year may be, the injury done thereby to the vine, will be seen and lamented in the following and probably many succeeding years.”

So much for the readiest modes of raising the vine from cuttings, and its subsequent treatment. But the propagation of this plant by seed, also deserves attention and trial, because valuable new varieties are not unfrequently thus obtained, and seedlings generally prove to be hardier and more productive than the parent plant, thriving in inferior soils, and being less susceptible of injury from atmospheric influences.—For this purpose the most perfect and earliest matured seeds of approved grapes are chosen, separated from the pulp, and dried. About the close of April, a bed having a western or northern exposure is to be prepared, by depositing a layer of leaves, or fresh horse dung about a foot high, and covering it with about four inches of rich garden mould. The seed is then dibbled in three inches apart in rows six inches distant from each other, and covered about half an inch. The ground is to be kept moderately damp, and about the middle of May the young plants will make their appearance. During the summer the bed must be kept clear of weeds, and occasionally watered if the season be dry. In August the seedlings must be pruned down to eight or nine inches, and at the end of October taken up and preserved in moist sand or earth, over the winter, in a well ventilated cellar.—In the following spring, they may be set out in rows, or planted where they are to remain permanently, and the subsequent treatment is to be in accordance with the directions given by Mr. Mattack.

An excellent liquid manure for the vine, may be prepared as follows: Take one bushel of cow dung, ten gallons of water, three gallons of bullock's blood, and two quarts of unslacked lime. Incorporate the whole well, stirring it frequently during two weeks, and water the plants therewith in the spring, shortly before the buds begin to start.

W.

For the Farm Journal.

A Habit of Observation Essential to Success with the Farmer.

BY FRANKLIN B. HOUGH, M. D.

Persons accustomed to follow a regular routine of business, which admits of but little variation, and requires little beyond a well trained exercise of muscular action, are liable to fall into a habit of inattention, and the mind unaccustomed to active exercise becomes by disuse enfeebled in its power, and disqualified for active thought. It is emphatically true with the mental, as with the material part of our natures, that exercise strengthens our power, and enables us the better to exert them when occasion offers. The common remarks, that great events call forth great men, and that the supply in literature and the fine arts, as well as in the commercial world, always equals the demand, are founded in the principle of our natures. In the mechanic arts, there is less opportunity for this mental exercise than in agricultural operations, and practice of the fine arts.

Yet even in the most simple and monotonous employment, a busy mind will ever find exercise, and not unfrequently originate an idea which when developed and applied, is capable of working the greatest changes.

It has been said that on the first introduction of the steam engine, a boy was employed to open and close the valves. By watching the motions of the several parts of the machinery, he contrived to attach a fixture which performed his task with precision.—Here was a labor as monotonous as could well be imagined, and to many, as barren of subjects for thought as could be selected;—but a fertile mind was not to lay idle, and ingenuity was found able to perfect a great discovery.

If we may believe tradition, some of the greatest discoveries in science, have been suggested by events so common as to pass by daily unheeded by the mass of mankind. The operations of the animate world around us, involve the application of principles in mechanics which contain the germs of the greatest of human discoveries. The operations of the aeronaut, the diver and the sailor have their analogies in the spider, and the nautilus, which practiced their arts before the Montgolfiers launched into the air the paper balloons, or the adventurous diver sought to carry air with him into the watery element, or the rudest sail was spread to the breeze.

To the husbandman in an especial manner, is the book of nature opened for perusal, and his attention is invited to the operation of agencies so wonderful, that if they could be exhibited for the first time to a person who had never seen them, would call forth exclamations of surprise at their operations. If a seed, cast into the soil, should germinate, spring up, grow into a tree, blossom, and bear fruit within an hour, few persons would look upon such a wonder without awe and astonishment; yet the operation is not

the less curious, or less worthy of admiration and study, because the successive changes are insensible, and require years for their consummation.

The natural habits and requirements of plants,—the circumstances that favor or retard their growth,—the soil and manures which are best suited to their wants,—the changes which a given soil requires in order that it may yield the greatest profits, for the longest time, and at the least expense,—the accidents and injuries to which plants may be liable, and the methods by which they may be protected from them; the best time and circumstances for seed time and harvest,—and lastly the best manner of preparing the soil, of rearing, collecting, and preparing for market the productions of his farm, all require an exercise of thought, and admit of improvements in the ways and means which the farmer has given to habits of observation, will not fail to notice and employ.

A similar remark might be applied to the rearing of domestic animals, and to every department of agricultural operations.

Under equal circumstances and habits of industry, it will universally be found, that the most observant farmer is the most successful, and that success is directly proportioned to the skill and care bestowed upon the adaptation of wants or requirements in the varied labors of the farm. Without suitable reflection, one may build a wall on a soil which heaves with the frost, and thus lose in a short time the labor which might in proper situations have lasted a lifetime,—or persists in cultivating the same crop in a field, when another would yield him thrice the profits, or continues in the raising of certain grain, or stock, while the market should have warned him to adopt a more profitable course,—or rejects a new improvement in implements for cultivating the soil, thereby placing the labor of his own hands, in competition with the horses of his neighbors,—or allows to run to waste a hundred sources of fertilizing manures, which might profitably and cheaply be applied to his soil,—or penitiously denies himself and family the opportunity of learning of the new discoveries in the science of agriculture, by neglecting to supply himself with journals and papers devoted to that subject; who in short, continues to follow in the steps of his father and grandfather, regardless of circumstances, without reflection, for no other reason than because they did thus and so.

By close observation, a practical knowledge of the quality of a given soil may be estimated from the kinds of timber or wild plants which flourish upon it in the state of nature, and an ordinary acquaintance with the principles of chemistry, will enable one to apply a few tests to determine the quality of soil, and judge of the kind of crop best suited to the locality. By closely observing the changes of the weather, one may by habit acquire the means of judging with some probability of accuracy, the au-

spicious time for sowing or harvesting. Certain localities have those peculiarities of atmospheric conditions, which afford data for estimating changes in the weather to a greater extent than others. The barometer affords the greatest assistance in these prognostications, and no well ordered farm should be without one of these useful instruments, well observed.

Such is becoming the progress of knowledge, and its application to the practical business of life, that a certain amount of education, and an active and thoughtful habit of life, are indispensable to success.

Every new improvement in agriculture, places its possessor in a situation above his neighbors, in point of facilities, which will enable him to excel those who do not adopt it; for here, as in manufactures, it is as idle to attempt with the hand rake, and flail, the hoe, and the sickle, to compete with the horse rake, and threshing machine, the cultivator, and the cradle or harvesting machine, as for the housewife to attempt to outdo with her spinning wheel, and hand loom, the machinery of the woolen factory. It is true that a multitude of the modern implements offered for agricultural use are no improvements,—many actually worse than useless, and hence appears the necessity of a cultivated habit of discrimination, to enable one to select the valuable and avoid the worthless.

Having dwelt upon the necessity of a habit of careful and constant observation in the farmer, in order to enable him to adapt the means to the end, with the greatest success, it remains to enumerate some of the measures best calculated to ensure this end.

The reason why men differ in their habits of observation, is much the same as that which makes two fields under similar natural circumstances differently productive. We often see a field of grain of great luxuriance, by the side of an open and naked common, or a garden teeming with every delicacy of the season, in the midst of an arid district, overgrown with thorns and useless weeds.

The great secret of success may be embodied in one word,—*cultivation*. Let a person cultivate in himself a method of noting every circumstance around him, of reflecting upon its cause, and of following it to its consequences, and he will assuredly acquire this habit so indispensable to success. Let him notice the effects of different manures upon soils, the relative productions and profit of the same grain upon different soils, or different manures, and of the same soil with different grains, or under a different system of tillage, or in different seasons, or with different preparation.

Let him watch the effects of fertilizers, the influence of the weather, the habits of insects injurious to his crops, the relative economy of different modes of culture, and above all, the better to ensure the continuance of these without interruption, and for future reference, let him acquire the habit of *recording*, in a

journal kept for the purpose, a register of his daily observations.

In no department of daily observation can this be done with greater benefit than with the weather.—If it were for no other purpose than to acquire a habit of observation, this would repay one for the time required, but these records possess an intrinsic value to science, as they enable us to study the laws which govern the origin and progress of atmospheric changes—of infinite practical importance to the farmer and the mariner.

Efforts are now being made to collect these observations from every part of the continent; and every one who is disposed can have the opportunity of assisting in this great work. Printed forms and blanks are furnished without expense by the Smithsonian Institution at Washington, to every one wishing to observe, and in addition to these, those who report receive from time to time publications of great interest.

Another method if adopted, would prove of great service to the farmer, by affording him the data from which to measure not only the success of different systems of tillage, but also his own progress in the science of agriculture, as applied in his labor. This is in the keeping of a *farm book*, in which is recorded the time and kind of plowing, sowing, and harvesting his different fields;—the amount and kind of fertilizers employed, and how and when applied, the quantity of seed used, and the amount, value, and nett profits of the crops.

It might contain memoranda of the products of his flocks, and dairy, the prices of produce at different seasons, and the relative profits of the different departments of his labor. To render this at all useful for ready reference, a regular system of entries should be employed, every subject should be kept by itself and easy reference secured by an index at the end of the volume.

A tabular arrangement would secure the greatest benefit with the least trouble, and the records of successive years standing side by side would afford at a glance the most satisfactory information in relation to the past history of his farming operations.

Should one desire to acquire a habit of order and regularity which would contribute greatly to success, two books might be kept. In the first he might enter the several facts worthy of notice, in the order of their occurrence, in the same manner as accounts are entered in a day book. A neatly kept volume properly ruled in tables, and furnished with an index, would serve like the ledger to collect in their proper places for instantaneous reference, the essential facts contained in the former volume.

The time required for these purposes would be inconsiderable, as the records might be made at odd moments, while the transcribing into the tabular ar-

angement might afford business for a long winter evening.

A habit of order and economy would be acquired by keeping these records, which could not fail to evince itself in all the details of the farm, and if this duty be enjoined upon the youth while assisting in agricultural labors, before leaving the paternal roof, the additional advantage would be attained of an early formed and lasting habit of observation, which would ultimately become a second nature and as indispensable as existence itself.

When a person attains the meridian of life, new habits are acquired with difficulty, and old ones abandoned with great reluctance. It is therefore to the youth, and those still forming those habits which they must carry with them through life, that the sentiments of this paper are commended with the earnest hope that they will receive mature reflection, and the suggestions therein contained will be adopted as a rule of life. They enjoin no self-denial, they require no pecuniary expense, and they will consume no portion of time which should be assigned to other duties. Every one loses daily in odd moments a hundred times more time than would be required, without noticing the loss, which if devoted to the acquirement of useful knowledge would serve as a fund for reflection and pleasure in old age, when man ceases to derive gratification from the busy world around him, and must rely upon the stores of memory, and the recollection of a well or ill spent life for his pleasant or miserable associations.

Somerville, St. Lawrence co., N. Y.

Agricultural Nuisances, No. 3.

TOAD FLAX, SNAP DRAGON, RANSTEAD SEED, DEVIL'S FLAX,
BUTTER & EGGS.

French, Mufflier linaire. *German*, Das Flachskraut.
Antirrhinum Linaria, *Lin.* *Antirrhinum communis*, *Lam.* *Linaria vulgaris*, *Tour.*

It is a *Linaria*, a genus established by Tournefort. The name is derived from the Celtic *Llin*, the name for flax, because the leaves resemble those of that plant. It belongs to the 14th class, *Didynamia*, and the 2d order, *Antiospermia*, in the artificial system of Linnaeus,—to order *Scrophulariaceae*, of Sprengel, and tribe *Antirrhinidea* in Gray's Botany of the Northern and Middle States.

The genus contains 136 species. Two of them are natives of the United States, and two more are naturalized. The one under consideration is a native of Europe, but is found extensively in this country, and is becoming a very pernicious weed. It does not seem to have spread itself alarmingly until recently, now it takes almost exclusive possession of the soil in some vicinities.

The root lives for many years and is almost as tenacious of life as the Canada thistle. The stem grows from one to two feet high, not branched except near the summit, smooth and leafy. The leaves are from

one to three inches long, narrow, smooth, and thickly scattered on the stem.

The flowers are scattered on the stem,—large and showy, the upper part pale greenish yellow, the lower part bright orange yellow. It flowers from June till September. The pod is of a cylindrical form, opening by several divisions at the top, divided into two cells, containing numerous black, irregularly shaped seeds, roundish dotted in the centre.

It is said to have been introduced into Philadelphia, by a Mr. Ranstead, a Welshman, as a garden flower. It has now become a great nuisance in many places, and will require much persevering effort to extirpate it. Continued culture with the hoe, is among the best means to destroy it. Although a vile weed to the farmer, it is not entirely useless. It is the principal ingredient in Wolphi's celebrated ointment for the piles. It is also used for dropsies, jaundice, and cutaneous eruptions, and Linnaeus says, it is used as a poison for flies.

The plant has a bitterish and saline taste, and when rubbed emits a smell resembling that of elder. Nothing will eat it, and every vestige of it should be destroyed by the farmer as soon as it makes its appearance on the farm.

J. M. M'MINN.

Unionville, Centre co., Pa., Oct., 1851.

The advantage of keeping good cows.

MR. EDITOR:—There is one subject which I think should claim the special attention of the farmers of Pennsylvania, but which for some unaccountable reason appears to have been strangely neglected—I mean the raising of the most improved breeds of cattle. For several years I kept only the common stock, that is, only such stock as is generally brought into our neighborhood by drovers from the western counties. Stock of this character, although apparently very cheap, prove in the end much the dearest. After a fair trial, I found this to be the case; many of the cows I kept, scarcely paying the expense of keeping, and having satisfied myself of this fact, I sold off my entire stock and purchased instead, some of the best Devon heifers I could procure. To the improvement of these I have devoted much time and attention, and find myself well repaid for both.

I will give you a few facts in relation to one of my cows, which took the first premium at our county exhibition on the 1st and 2d of October. We commenced milking her on the 14th of December last, and on the first week made 13½ lbs. of butter, and the average yield of butter for eleven successive weeks was 10 lbs. or 110 lbs. in all. On the 23d of May, the yield of butter from this cow was 8½ lbs. per week, and when within six weeks of calving, 4½ lbs. per week. The yield of butter during the year was 400 lbs. the whole of which was printed and sent to market, where it commanded an average price of twenty cents, thus making \$80 worth of butter.—

Now, taking all these facts into consideration, is it not the part of the wise farmer or dairymen, to keep only improved stock. They may cost a little more in the beginning, but in the end they will prove the cheapest. The same amount of feed is required for the common cow, the same attention is also necessary, while the return she makes, is not half as much as that of one of the improved breeds. If I had the choice, I would rather pay a handsome price for a good Devon, than take a common cow as a gift.

The cow above referred to is a deep red, and weighs 1269 lbs. As I intend keeping a regular account of the butter we make from her the coming season, and as I hope to increase the amount somewhat, I will give you a full and fair account hereafter.

W. W. TAYLOR.

Upper Providence, Montgomery co., Pa.

The Arboretum.

Magnolia conspicua—Is a native of the district of Yulam, China. It is perfectly hardy in all the middle States. The tree is of a beautiful conical form and rapid growth; it attains an altitude of about forty feet; when covered with its tulip-like white flowers it is a very attractive object, and as it blooms previous to the expansion of the leaves is one of the earliest harbingers of spring. It is entirely free from attack by insects, and is unsurpassed as a lawn tree.

Mulcira aurantiaca, *Osage orange*.—This magnificent deciduous tree is found in abundance in Texas and all the southwestern States. It is not sufficiently appreciated as an ornamental shade tree; very appropriate to the park and lawn. The tree is of very rapid growth, very graceful in its outline, and has the excellent quality of retaining its rich glossy green leaves until extreme frost. It is entirely free from attack by insects. As a hedge plant its merits are fully appreciated, and in that form is being rapidly diffused over our country.

Acacia julibrissim.—The "silk tree," of the south, is hardy in light soils south of New York. It is a most beautiful shrub, producing in clusters numerous tufts of straw colored flowers. The leaves are beautifully compounded, very graceful, and of a light sea-green color; the contrast of the flowers and foliage is

very striking.

Hulesia tetrapetra.—The "silver bell" or snow drop of South Carolina, is a beautiful tree, quite hardy in all the middle States and growing to the height of forty feet. The form of the tree is compact and when covered with its innumerable bell-shaped silvery flowers, produces a fine effect. If permitted to branch low, it is quite unique in the landscape.

Rhus cotinus.—Venitian shumace, smoke tree, mist tree, and brown fringe tree, for by all these names it is known, is a first class shrub, very singular in appearance when in bloom; when in clumps with other shrubs of same size and different foliage it has

a fine effect and ought to be more extensively cultivated.

JAMES D. FULTON.

Philadelphia, Oct., 1851.

Temper in the family.

BY MRS. L. G. ABELL.

None, perhaps, have so many provocations to a hasty temper as these families where business hurried and drives from morning till night, and where so much depends on each one performing their part in the right way and right time and place.

But a little consideration, and care, and watchfulness over the feelings and *words*, will do wonders, and the sunshine of happiness, and flowers of kindness and affection, shall reward with their light and sweetness all efforts to cultivate them, in the heart and home.

A bad temper, long indulged, gets at length the entire mastery of the mind, and roots out all the better propensities, destroys the pleasures of domestic and social life, and is often a source of deeper anguish than the heart can conceive or pen describe.

The *moral* in man should ever take the precedence in all things; let his business be what it may he should not forget that he has a capacity for enjoyments above those of sense.

Reflection for one moment, will often cool the risings of a hasty temper. Remember that your own inadvertence and unintentional offences have been mistaken for *malice*, and you will soon learn to be as lenient to others as you would have them to you. Think of friendships destroyed, wounds made, distress occasioned, alienations produced, by one paroxysm of anger and you will soon become master of so dangerous an enemy.

If you even receive an injury, or an insult, let that person know that you are governed by higher motives than to repay him in the same, or to allow the base conduct of another to disturb your own happiness and equanimity. "Overcome evil with good" and it will bring comfort to the injured breast and be there as a *fountain of perpetual peace*.

Chittenango, N. Y.

MR. EDITOR:—There may be some of your readers who are so unfortunate as to have their potato crop affected with rot in the cellar, which was my misfortune in 1850, in one portion of the crop to a great extent. When discovered, I at once turned them over, removing all that were affected; but that did not arrest its progress. We again turned them and took at the rate of one bushel air slackened lime and two bushels charcoal dust to the hundred bushels of potatoes, and liberally sprinkled them when turning. Its effects were magical; the whole atmosphere of the cellar was purified, the disease arrested and even the partially decayed parts dried up. We feel assured that any who try it will arrive at the same happy results.

Yours truly,
R. BUIST.
Rosedale Nursery & Seed Farm, Oct., 1851.

County Agricultural Exhibitions.

Montgomery County Exhibition.

The annual exhibition of the Montgomery county society was held at Springtown, two and a half miles from Norristown, on the first and second of October. We embraced the occasion to spend a few pleasant days with our agricultural friends in Montgomery, and are free to state that a more agreeable visit we have never paid. We reached the grounds at an early hour on the morning of the first, but found that there were "earlier Birds" than ourselves; as the enclosure was rapidly filling with visitors, and quite a number of fine cattle, and a large variety of agricultural implements, produce, &c., were in their appropriate places. As the day promised to be an excessively hot one, we availed ourselves of the coolness of the morning to examine the handsome arrangements of the society, which we think far superior to those of any other society whose grounds we have visited.

The grounds contain five acres, surrounded with a most substantial board fence, six feet high. The whole of one side is occupied by sheds and stalls for cattle. A large portion of another side is devoted to pens for sheep, hogs, &c., and about two-fifths of the whole enclosure is appropriated to the showing of horses. Suitable places are assigned to the display of agricultural implements, machinery, &c.

In the centre of the enclosure is a very handsome building, 85 by 35 feet. The whole of the lower part of the building is in one room, which was well filled with agricultural produce, specimens of mechanical skill, &c. The centre room up stairs is 50 by 35 feet and is occupied by the ladies, who, on this occasion, made a most creditable display of their handiwork. At each end of the building, up stairs, is a room used for committee purposes. The buildings, sheds, stalls, fence, &c., are handsomely whitewashed, giving the whole a neat and cleanly appearance.

The use of the grounds is given to the society free of charge for twelve years, by the owner of the public house directly opposite. If, at the end of that time the society desire to remove to any other place, they have the privilege of removing the buildings, but not the fence around the enclosure. The fact deserves to be mentioned that the proprietor of the grounds also contributed the handsome sum of \$400 towards the erection of the fence.

All these improvements have been made within a few years. The society is free from liabilities, and in a highly prosperous condition. And now a word in regard to the exhibition.

The display of cattle, all things considered, was very good. There were not many varieties, but those exhibited, were generally in good condition and evinced careful treatment. Our limits will not permit us to particularize.

A number of horses were exhibited, amongst which

we observed several fine stallions, and quite a goodly number of mares, colts, young horses, &c.

The display of agricultural implements, was, we understood, not so large as that of last year, it being confined mainly to those kinds manufactured in the adjoining counties, yet it was creditable and attracted much attention.

Samples of excellent corn, wheat, and other produce were exhibited in the lower saloon of the main building. There were but few vegetables, the excessive drought having injured them greatly. We observed some superior potatoes as well as cabbages, beets, &c. Quite a number of household articles were also exhibited in this apartment.

In the upper saloon, the ladies had it all to themselves, and as usual, by their good taste and skill succeeded in keeping their apartment crowded with visitors during the whole time of the exhibition.

On the afternoon of the same day, the annual address was delivered to a large and attentive audience by the Hon. Wm. D. Kelley, of Philadelphia, and did infinite credit to that gentleman's head and heart. As we hope to be able to present it to our readers at some future day, we defer further notice.

The number of visitors was very large, and all seemed delighted with the exhibition. In concluding this hasty sketch. We cannot but tender our most sincere thanks for the many gentlemanly courtesies extended us by the officers of the society as well as many other gentlemen. The yeomanry of Montgomery, gave us in addition, a most substantial evidence of their appreciation of our efforts to aid the cause of agriculture, by adding several hundred names to our subscription list.

WORTH KNOWING.—A young lady of this city, says the *Philadelphia Evening Post*, while in the country, some years ago, stepped on a rusty nail, which ran through her shoe and foot. The inflammation and pain was of course very great, and lock-jaw apprehended. A friend of the family, however, recommended the application of a beet, taken fresh from the garden, and pounded fine, to the wound. It was done, and the effect was very beneficial. Soon the inflammation began to subside, and by keeping on the crushed beet, changing it for a fresh one as its virtue seemed to become impaired, a speedy cure was effected. Simple but effectual remedies like this should be known to every one.

RED ANTWERP RASPBERRY.—The *American Agriculturist* says, we hear of magnificent returns of labor, land, and capital devoted to this splendid fruit. One horticulturist, in Connecticut, realised \$800 for his last year's crop, on half an acre, while the huckster to whom he sold them gained nearly as much more.

Roots. All roots should be excluded from the light during the winter, and kept in as low a temperature as can be made convenient without danger of freezing.

The Alderneys.

THE Normandy cattle are from the French continent, and are larger and have a superior tendency to fatten; others are from the islands of the French coast; but all of them, whether from the continent or the islands, pass under the common name of Alderneys.

They are found mainly in gentlemen's parks and pleasure-grounds, and they maintain their occupancy there partly on account of the richness of their milk, and the great quantity of butter which it yields, but more from the diminutive size of the animals. Their real ugliness is passed over on these accounts; and it is thought fashionable that the view from the breakfast or drawing-room of the house should present an Alderney cow or two grazing at a little distance.

They are light red, yellow, dun or fawn-colored; short, wild-horned, deer-necked, thin, and small-boned; irregularly, but often very awkwardly shaped.

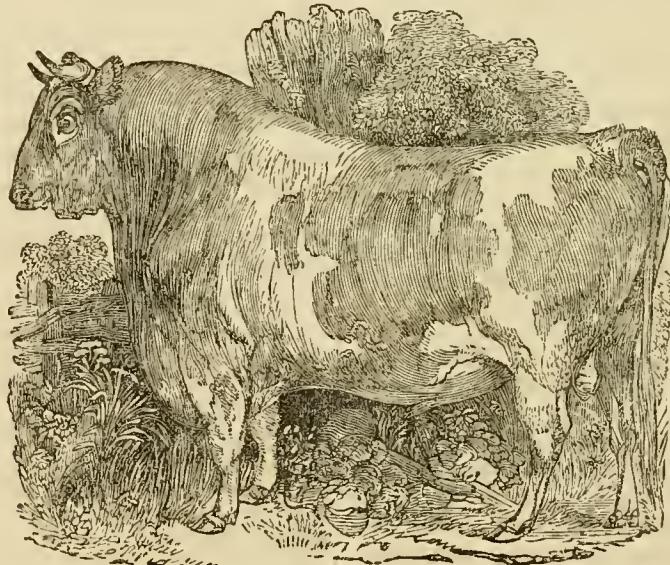
Mr. Parkinson, who seems to have a determined prejudice against them, says that "their size is small, and they are of as bad a form as can possibly be described; the bellies of many of them are fourfifths of their weight; the neck is very thin and hollow; the shoulder stands up, and is the highest part; they are hollow and narrow behind the shoulders; the chin is nearly without flesh; the hocks are narrow and sharp at the ends; the rump is short, and they are narrow

and light in the brisket." This is about as bad a form as can possibly be described, and the picture is very little exaggerated, when the animal is analyzed point by point; yet all these defects are so put together, as to make a not unpleasing whole.

The Alderney, considering its voracious appetite—for it devours almost as much as a short-horn—yields very little milk. That milk, however, is of an extraordinary excellent quality, and gives more butter per quart than can be obtained from the milk of any other cow. Some writers on agricultural subjects have, however, denied this. The milk of the Alderney cow fits her for the situation in which she is usually placed, and where the excellence of the article is regarded, and not the expense; but it is not rich enough, yielding the small quantity that she does, to pay for what she costs. On the south coast of England, there is great facility in obtaining the Alderney cattle, and they are great favorites there.

One excellence it must be acknowledged that the Alderneys possess: when they are dried, they fatten with a rapidity that would be scarcely thought possible from their gaunt appearance, and their wants of almost every grazing point, while living.

Some have assigned to the Norman or Alderney cattle a share in the improvement of the old short-horns; but the fact does not rest on any good authority.—*Youatt & Martin on cattle.*



THE ALDERNEY BULL.

MICE IN BARNs.—A writer in the *Rural New-Yorker*, who has suffered greatly by these pests to the farmer, states that he has found that hay-mows having spearmint in them, were free from rats and mice, while others, in the same barn, having none of this herb scattered about, were nearly destroyed by them. Other experienced farmers concur in the opinion that spearmint is a complete antidote against their operations. This is an easily tried remedy, and our farmers, suffering from the same cause, are recommended to apply it.

TO BONE A FOWL.—Clean the fowl as usual. With a sharp and pointed knife begin at the extremity of the wing, and pass the knife down close to the bone, cutting all the flesh from the bone, and preserving the skin whole; run the knife down each side of the breast-bone and up the legs, keeping close to the bone; then split the back half way up, and draw out the bones; fill the places whence the bones were taken with a stuffing, restoring the fowl to its natural form, and sow up all the incisions made in the skin.

THE FARM JOURNAL.

Assistant Editor's Department.

A. M. SPANGLER, ASSISTANT EDITOR.

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THE FARM JOURNAL may be had at the following places:—

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Those having business to transact with us will please call at the Book Store of W. H. Spangler, in North Queen street, Lancaster, where we or our representative will at all times be in attendance.

CREDIT.—The article on Tobacco, which appeared in our last No., should properly have been credited to the Southern Planter, from which excellent Journal it was copied.

Our absence at the State Fair, and the unusual pressure of business which preceded it, must be our apology for the want of proper arrangement of articles in our present number.

State Agricultural Exhibition.

The first Exhibition of the Pennsylvania State Agricultural Society was held at Harrisburg on Wednesday, Thursday and Friday, Oct. 29, 30 and 31.—It was an event looked forward to with the deepest anxiety by the friends of agriculture throughout the State, as upon its success or failure depended greatly, the position Pennsylvania would in future assume in regard to her great leading interest. Many conjectures were hazarded as to the result of the enterprize, and not a few of those who most sincerely desired its complete success, were fearful that it would prove a failure. For our own part, we never for an instant, indulged a doubt. We have ever contended that the agricultural resources of our own State are superior to those of any other in the Union, and while some have endeavored to create the impression that our farmers were wanting in intelligence and enterprise, we have ever taken the opposite ground. We are now rejoiced to see that the honest yeomanry of Pennsylvania have taken the matter into their own hands, and nobly have they vindicated their character. It was not the amount of stock, the quantity of agricultural productions or the number of implements exhibited that are to be regarded as an attempt on the part of the farmers to place themselves in a right

position before their agricultural brethren elsewhere; but it was the immense outpouring of the multitude, and the hopeful spirit that pervaded all. There was no spirit of bravado manifested, but an honest conviction that Pennsylvania could do better, and a spirited determination to establish that fact beyond peradventure at the next annual exhibition. Our farmers are proverbially modest and unassuming in their character, and it required such an exhibition as that held at Harrisburg to convince them of the fact that they are possessed of all the material necessary to get up a display inferior to that of no other State. We are neither a prophet, nor the son of a prophet, but we venture the prediction that the next Fair of the Society will equal in every particular those of N. York and far exceed those of Maryland or Ohio. The spirit that has so long quietly slumbered in Pennsylvania has at length been thoroughly aroused—a proper feeling of State pride has been awakened, and we look forward with a deep and abiding confidence to the day when the people shall again be invited to bring forward for exhibition the rich agricultural resources of our noble State.

And now a word in regard to the arrangements.—Our limits will not permit us to say as much as we could desire, nor will it be in our power to particularize; we must reserve our notices of stock, implements, &c., for a future number.

The grounds were beautifully located on the eastern bank of the Susquehanna, about one mile north of Harrisburg, and finely adapted to the purpose.—Notwithstanding the rain which fell before and during the exhibition, no inconvenience was suffered from mud or moisture, every part of the enclosure being in a condition fit for a lady's promenade.

The fencing, sheds, &c., were erected under the superintendence of Daniel Wilt, Esq., of Harrisburg. The reception and disposition of articles and stock was also entrusted to him, and it is but justice to say, that his multifarious duties were discharged in the most satisfactory manner.

The tents were furnished by Mr. C. Williams, of Rochester, N. Y., who with his assistants, were on the ground during the whole time. Mr. W. also furnished the tents for the N. Y. State Fair. His arrangements were most excellent and we are indebted to him for many courtesies.

The President, Hon. F. Watts, arrived at Harrisburg on Monday, and continued there during the whole week. A world of praise is due Judge Watts for the dignified yet energetic manner in which he discharged his arduous and responsible duties.

Various members of the Executive Committee were also present rendering good service, and assisting materially in completing the arrangements.

The Committee of arrangements were untiring in their efforts to provide every thing that could conduce to the comfort of the animals and convenience

of the exhibitors. Nothing was left undone that was required, or of which they had notice in time, and we are gratified in being able to state that their efforts to please were fully appreciated by the immense crowd.

The Marshals under the command of John C. McCallister, Esq., of Harrisburg, Chief Marshal, discharged their duties admirably, as the remarkable order and decorum maintained during the whole exhibition fully proved.

R. C. Walker, Esq., of Elizabeth, Allegheny county, Secretary of the Society, and G. H. Bucher, of Hogestown, were at their posts at all hours and with their efficient clerks, succeeded in supplying the heavy demand for certificates of membership and tickets of admission. They as well as the President and Vice Presidents are the persons to whom application for membership may be made.

The manner in which the duties of the various committees were discharged, and the general satisfaction their awards of premiums and diplomas gave, entitle them to honorable mention. Several of the committees, but especially, the one on Agricultural implements, were entirely too small. This was the result, not of any desire to withhold a fair examination of all the implements, but from the fact that the display in this department was so much greater than had been anticipated. This will be corrected in future exhibitions.

The display of stock was not extraordinary, although it was fully equal to public anticipations.—Had it not been for the wretched arrangements of the Central Rail Road Company it would have been much better, as a large number of fine cattle from the eastern counties, and New Jersey, intended for the exhibition did not reach the grounds for want of suitable conveyances. This is a matter to be deeply deplored. None could have been more deeply interested in the success of the exhibition than the company, both for the present and the future, and yet, their arrangements were faulty both in regard to the conveyance of stock and passengers. We shall attend to this department more fully hereafter, as there were many animals on exhibition of the best breeds well deserving of notice.

The display of horses was good in some respects, and defective in others. We should have been proud to see a larger number of our Pennsylvania draught horses. Quite a number of superior blooded and other stallions were exhibited, as well as promising brood mares, colts, &c.

The display of articles of domestic manufacture was highly creditable. Here the ladies had the sway, and we most cheerfully accord to them the high praise they deserve. We would suggest to the Executive committee, the appointment of a committee of ladies to this department.

The agricultural produce department was tolerably

well represented, as was also the mechanical. The contributions in Floral Hall were good, though not large in number.

The Ploughing match attracted much attention.—We considered it one of the most important features of the exhibition, and were glad to perceive that the large majority agreed with us. There is yet room for important improvements in ploughs and the more attention given to their construction and work, the sooner their improvement will be effected. Some of the ploughing was excellent, and deserves special mention hereafter, while others were deficient in all that constitutes good work.

We were highly gratified to observe that with a few exceptions, the plows were all manufactured in our own State, and gave evidence of superior mechanical skill, both in their construction and finish.

The contributions of fowls were excellent, and attracted as much attention as any other part of the exhibition. The hen fever seized the people, and every chicken on the ground from the tiny Bantam to the tall Shanghae, that could be bought, was purchased at high prices and sent in various directions through the State.

Refreshments of excellent quality were served up in abundance by Mr. Hinkle of Columbia. His arrangements, though extensive, were not as ample as they should have been. This however was the result not of any want of disposition to accommodate, but of a mistaken notion in regard to the number of persons who would be in attendance at the fair. Mr. H. will know better next time.

The only objectionable feature we observed, was the permission granted a number of itinerant vendors of worthless articles, to display their wares, and by nonsensical declamation, divert the attention of the crowd from the careful examination of the implements, stock, &c., thus defeating one of the great objects of the exhibition.

It may be confidently asserted and we refer to the fact with pleasure, that never, on any occasion did so large a crowd assemble, and continue in close proximity for so long a period with as little disturbance. All were agreeably surprised at the extent of the display and the magnitude of the crowd, and it was heart cheering to us, who have never for a single instant wavered in our faith in the ability of Pennsylvania to stand with the foremost in an agricultural point of view, to hear from thousands of lips, "this is well, but next year we will do better." Not a drunken man was seen on the grounds nor did any thing occur to mar in the slightest degree the harmony and good feeling that prevailed. It was a proud event for the Keystone State, and one that will tell powerfully upon her future greatness. The number of persons in attendance was variously estimated at from 35,000 to 45,000.

In concluding this very hasty and imperfect sketch

of the fair, we beg leave to tender to the committee of arrangements, as well as all the officers our unfeigned thanks for the many courtesies extended us. A tent was provided in which we opened our office, and invited our friends to call. They did call, by scores and hundreds, and the greetings we exchanged with them were of the most pleasant and friendly character. It may not be out of place to remark, that our subscription list was largely increased.

The Central Rail Road Company.

We regret the necessity that compels us to speak of the conduct of the Central Rail Road Company in regard to the transportation of passengers and stock to the State Fair. Instead of throwing open all their trains at half price and permitting visitors to the State fair to take passage in any one of them, two trains only were set apart for this purpose, and these wholly insufficient to accommodate the vast crowd desirous of visiting the fair. We may safely assert that thousands of persons from Lancaster city and county were prevented from going by the slimness of the company's accommodations and the unreasonable hours at which the trains reached Harrisburg. We will not advert to the character of the cars, nor the insolence of some of the conductors. We have received several letters from gentlemen of the highest respectability in which the conduct of some of the conductors is spoken of, and we think it becomes the duty of the President and Managers to enquire into this matter. Amongst those who strove to accommodate passengers we are pleased to mention, Mr. Paul Hamilton, who left nothing undone that would in any way conduce to their comfort.

The arrangements for the transportation of stock were equally deficient, and had the effect of rendering this department of the exhibition far less creditable than it would otherwise have been.

It is incomprehensible to us, why the most ample accommodations were not afforded. It certainly was a profitable affair for the company and would have been more so, had they manifested a little more liberality. We know that the entire motive power of the Columbia Rail Road was placed at the disposal of the Central Rail Road Company, by the Canal Commissioners for the conveyance of passengers and stock, if necessary. Where then is their apology? We can and do assure them, that a feeling of deep indignation pervades the community and we think, very properly.

FRUIT AND ORNAMENTAL TREES.—We have made arrangements to supply orders to any extent for fruit and ornamental trees of every description at nursery prices. Persons ordering from us may rest assured that the trees furnished will be all they are represented, and that no pains will be spared to guard them against imposition. Catalogues may be had at our office.

Philadelphia Society for the Promotion of Agriculture.

The annual exhibition of this venerable society was held at the Rising Sun village on the 8th and 9th of October. Having a leisure day or two, we determined to spend it with our Philadelphia friends, knowing that we could not pass the time more agreeably or profitably.

The first thing which struck our attention on entering the grounds was the superb display of poultry, embracing fine specimens of the most select breeds. We examined this department with feelings of deep interest, and think we are safe in asserting that the display has never been equalled at any county exhibition elsewhere. Amongst the contributors were Messrs. Hague, Wistar, Ditmar, McGowen, Funk, Hendricks, Leonard and Bumstead. An object of special interest was a Shanghai hen, the first ever imported to the United States. She is seven years old, looks well, and we were informed lays well. A brood of her chickens were on exhibition and bore unmistakeable evidence of purity. She was imported by express order, by A. T. Newbold, Esq., of Philadelphia, who has given great attention to fowls, and has been highly successful in breeding them.—We regret that our limits forbid a more extended notice of this interesting department of the exhibition.

There was a fine display of neat cattle, including the Durham, Alderney, Devon, Ayrshire and other choice breeds. The animals looked well and were generally admired. The principal contributors to this department were Gen. Cadwallader, Owen Sheridan, James Gowen, Samuel Williams, Dr. Barton, George Blight and others. If our Philadelphia country friends could infuse a little more of their spirit into other portions of the State, Pennsylvania would soon be without a rival in this department.

We did not consider the display of horses good.—A few were exhibited possessing fine points, but as a general thing the display was poor.

A large number of swine were exhibited of the Berkshire, black and white, Chester county and Duchess, together with some fine crosses of the Berkshire and Chester county breeds. This department was creditably filled, all the animals bearing evidence of superiority of kind.

Of Sheep, the display was limited but highly select. One of the principal attractions in this department was a superb New Oxfordshire Buck, exhibited by Aaron Clements, Esq., of Philadelphia. Mr. Hood, of Chester county, exhibited a number of choice Cotswolds, South Downs and Bakewells. Mr. Johnson was also a contributor to this department.

The display of implements was large, and interesting. Many implements of the most approved construction were shown by Messrs. Prouty and Barrett, C. B. Rogers, Mr. Wilkinson of Mount Airy, and others.

The contributions of agricultural productions were excellent in quantity and quality, notwithstanding the unprecedented draught which prevailed.

The annual Address was delivered by our friend John S. Bowen, Esq., of Chester county, than whom a better could not have been selected. It was listened to with marked attention by the large crowd, and abounded in much that was valuable and interesting.

According to custom, the Society with the Committees and invited guests, sat down to a most bountiful repast provided by that caterer of good things R. B. Jones, of the Exchange Hotel, Philadelphia.—Amongst the guests present were Mr. Howard of the Albany Cultivator, Dr. J. Davis President of the Montgomery county Society, Jacob Frantz, Esqr., President of the Lancaster County Society, Rev. Dr. Choles of Rhode Island, Gen. Richardson of Richmond Va., and other distinguished gentlemen. The President of the Society, James Gowen, Esq., presided at the table, with dignity and ease. After the cloth was removed, speeches were made by Mr. Howard, Gen. Richardson, Gen. Cadwalader, A. S. Roberts, Dr. Choles, J. Price Wetherill and others, all of which breathed a warm devotion to the cause of Agriculture. Everything passed of pleasantly and agreeably.

In concluding this hasty sketch, we cannot forbear alluding to the narrow limits of the grounds occupied by the Society for their exhibitions. It appeared to us, that the pioneer Society of agriculture in the U. States, the influence of whose example has been felt and acknowledged in every section of our country, should have ample room for their operations. Their existence as a Society is no longer a problem. For sixty-six years they have flourished, and with each succeeding year are growing more spirited and stronger, and we hope to see the day when this venerable association shall have grounds of their own, worthy the character of the Society and the good cause for which they have so long and nobly battled.

THE PHILADELPHIA POST OFFICE.—Will the Post Master at Philadelphia be kind enough to inform us why so many and such frequent complaints of failures of the Farm Journal to reach its proper place of destination in the city and county are made to us. So frequent have been these complaints, that we are almost afraid to meet a subscriber from that section, lest his first inquiry should be, "why have I not received my Journal." Now it is very evident that there is something wrong about this office. If we were not particularly careful in mailing our Journal, we would willingly take a part of the blame upon our own shoulders; but knowing as we do, that the fault is not with us, we know not where to place it but at the door of the Philadelphia Post Office. We therefore ask more attention to this matter on the part of the Post Master.

The farmer who had nothing to learn.

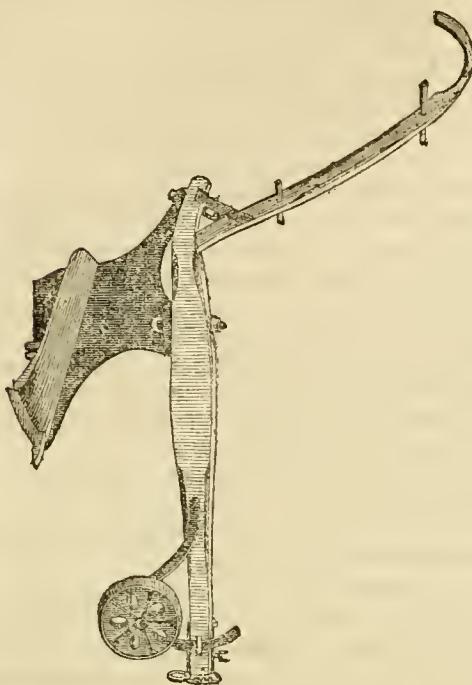
There are in every community, farmers, who conceive it impossible to add anything to their already acquired stock of knowledge. We met one of this class a few days since, who in answer to our inquiry whether he was a subscriber to an agricultural paper, indignantly replied that "book farming was a humbug, and that he knew more of farming than any body could tell him." We did not argue the point with him, conceiving it to be worse than useless; but as we left him, we took a few notes of the condition of this model farmer's premises, which we present to the readers of the Journal, with the hope that they will prove of service.

The paling fence enclosing the house yard, was broken down in several places; one of the hinges was torn off the gate, and directly in front of the kitchen door several lank looking swine were wallowing in the mud hole, where, for dear knows how long, the slops of the kitchen had been carelessly thrown. We thought, that were he really as wise as he conceived himself to be, that fence would have been repaired, that gate hinge fastened.—a good breed of swine would have replaced those hungry looking ones, and the rich slops of the kitchen would have been applied to a better use, than to create an unwholesome and unpleasant wallowing place for swine.

The barn stood on an eminence, and directly in front of it, a small stream flowed. From the manure heap to this stream; the rich manure water was flowing, in a silent but steady stream, and beneath some cherry trees that skirted the lawn, I observed large quantities of the excrements of the fowls, exposed to the action of the weather, and aiding materially the growth and vigor of the wilderness of weeds around. Had he been so very wise, he would have checked the waste of that precious manure, and instead of permitting his fowls to roost upon the cherry trees, (and thus not only expose them to the inclemencies of the weather, but lose in addition their very valuable manure,) he would have given them a place of shelter and by that means secured their comfort and productiveness, as well as their excrement.

An orchard of young apple trees was almost entirely destroyed by the bore—the fences that enclosed his meadows were in a ruinous condition.—Several hogs were actively engaged in turning up the sod, and as we attempted to close the gate that led from the main road to the house, we found it wholly impracticable, one hinge being completely torn off, the other so twisted as to render the effort vain.—Want of time prevented further observation, but we had seen enough to satisfy us, that the careful perusal of any good agricultural journal, and a practical application of some of the hints contained in it, would have been hundreds of dollars value to over-wise farmer.

Rogers' Improved Subsoil Plow.



The advantages arising from subsoiling have been so clearly proven, that the attention of farmers is being drawn to it now in a greater than at any former period. We occasionally, it is true, hear a dissenting voice, but this appears to be the result not of any want of faith in the use of the subsoil plow, but of a desire to draw out writers upon the subject. Notwithstanding all that has been said in regard to subsoiling, there are still many farmers who do not understand its advantages. It is a well known fact that where land has been plowed to a certain depth for many years, the bottom or pan becomes so hard and solid as to prevent the water from penetrating to a greater depth than the pulverized soil, say five or six inches. In some soils the water may sink to a greater depth, but it requires a longer time than it should. As a consequence of this hard pan, the roots and fibres of growing plants are also checked in their search for food. Instead of penetrating to their proper depth, it will be found upon examination that their roots curl round, just as though a stone wall had been encountered by them. This, of course, leaves them in an unhealthy, because an unnatural condition, and the farmer is often led to wonder what can be the cause of the sickly appearance of his crops. Now, where the subsoil plow is used, this pan is well loosened to a depth of from six to twelve inches. The water which hitherto has been confined to a depth of five or six inches, now penetrates twice that distance; the roots follow, and the delighted farmer beholds a fine crop, where formerly, the yield had been next to failure.

Science has proven that subsoiling is one of the great sources of phosphate of lime. For thousands of years this valuable fertilizer has been accumulating in the hard soil beneath the plowed ground, and there it will remain forever, unless the subsoil plow is brought into use, to develop this rich mine for the farmer. The atmosphere is another great fertilizer, and the land upon which the subsoil plow has been properly used, receives with open mouth the rain and dews, and retains them for use in dry seasons. No one will deny that a deep tilled soil will resist drought much better than one that is shallow tilled, and therefore, the farmer who after having plowed to the depth of six or seven inches, follows that plowing with the subsoil to the depth of eight or ten more, has a decided advantage over his neighbor who rejects the use of it altogether. In wet seasons, subsoiling acts as a drainer, and in dry seasons it absorbs moisture largely from the atmosphere, and retains it for a much longer period, than where the land is plowed as it is ordinarily done.

The above cut represents a new cast steel extending point subsoil plow, the invention of C. B. Rogers, of Philadelphia. It will be observed that this implement differs from any other in use, in having but a single handle. This, we are informed by several gentlemen who have tried them, is a decided improvement, enabling the plowman to work with much greater ease than by the old plan. We saw the plow in operation at Norristown, and could not but admire the effectual manner in which it loosened the hard subsoil to a depth of ten or twelve inches, leaving it in a finely pulverized condition. Those farmers who cannot afford to purchase guano or other expensive fertilizers, can certainly afford to purchase one of these, or some other good subsoil plow, and for our part we should greatly prefer the use of the subsoil plow to the guano even at the same price.

Lancaster County Ploughing Match.

The first Ploughing Match ever held in Lancaster County, came off on Monday September 29th, on the farm of Mathew Faulding, Esq., in the South Western limits of Lancaster city. There were nine competitors, every one of whom proved himself a master ploughman. The very unfavorable condition of the ground, led us to believe that it would be impossible for them to do themselves justice; but with the aid of their splendid teams, excellent plows and superior skill in their management, they succeeded most admirably. The furrows were plowed to the depth of full seven inches, and the ground, all things considered, well pulverized. We doubt whether better plowing could have been done under the circumstances.

The attendance of spectators was large, amongst whom were a great number of the best and most influential farmers of Lancaster county, all of whom

expressed themselves highly pleased with the contest. We regard this match as one of the utmost importance, upon which may be built a prouder reputation for Lancaster co. than she even now possesses. Its complete success, and the deep interest felt in regard to it throughout the entire county, has served to dispel the erroneous impression, that there was not a spirit amongst her farmers, to encourage such a contest. We knew better, and we now predict that next September one of the finest Agricultural County Exhibitions in Pennsylvania, will be held at Lancaster. It is already a fixed fact. The farmers have taken hold of the matter themselves, and are determined to permit no County in the Commonwealth to outstrip the "Garden Spot" in spirited enterprise.

The following were the successful competitors:

D. S. Herr, \$40.—James Boon, \$30.—Reuben Weidler, \$20.—Isaac Lantz, \$10.—David Goehauer, \$5.

It is but justice to all the plowmen to state, that the judges had no little difficulty in deciding upon their respective merits, and that their decision was made in strict accordance with the published regulations.

WE ARE indebted to a friend for the following spirited account of the supper of the Agricultural Society at Harrisburg. We were present during the early part of the evening, but felt too much fatigued to remain during the whole time.

The Banquet.

The officers of the Society gave a closing banquet on Friday evening to Hon. Andrew Stevenson, the orator of the day, and other distinguished strangers and invited guests. The supper was furnished by Mr. Herr in his usual good taste. Owing to the lateness of the hour fixed for the occasion, in the evening of the last day of the exhibition, the company was not as numerous as could have been wished. Many had left for their homes, among them, we had to regret the absence of E. P. Prentiss, Esq., of Mount Hope, B. P. Johnson, Esq., of Albany, who with L. G. Morris, Esq., of Mount Fordham, composed the delegation from the New York State Agricultural Society. Notwithstanding, a goodly number sat down to table to discuss the provoking subjects laid before them by their provident host, in the shape of roast turkey, duck, partridge and other viands, with sparkling champagne and other exhilarating wines—to all of which, in order and detail, the company addressed themselves with a determination, that promised a zealous and patriotic investigation, which throughout the whole sitting never seemed to abate or flag, until the whole bill of fare had been gone through. The greatest order and good feeling prevailed, though now and then there occurred some occasional cross firing, and the popping up of some cork before it had leave to speak, which brought out other corks calling the delinquent to order, creating for a time a hubbub,

which could only be allayed by letting them all pour out, ad libitum, whatever they had to offer. These little episodes were not only evanescent and amusing, but seemed to produce more harmony and good humor, imparting a freshness and vigor, by way of change and recreation, to the officers and managers, who had toiled through a three days exhibition with all its attendant cares and anxieties.

The Hon. Frederick Watts, of Carlisle, President of the Society presided, supported by Vice President James Gowen, of Mount Airy, Philadelphia county; Ex-Governor Porter was on the right of the President, Governor Johnson being unavoidably detained at home in business, the Hon. A. Stevenson of Virginia on the left. The Board of Canal Commissioners, with other invited guests were in charge of the Vice Presidents. The following were among the regular toasts, announced from the chair.

"The President and constituted authorities of the United States."

"The Governor and constituted authorities of the commonwealth of Pennsylvania."

"Agriculture, Commerce, and Manufactures—speed the plow that turns the furrow—the ship that plows the wave—the shuttle that threads the woof."

"The New York, Ohio and Maryland State agricultural societies, and other kindred associations throughout the United States—May the only rivalry found among them be, which can best promote the great cause of agriculture."

"The Coal and Iron fields of Pennsylvania—May they soon be made to yield abundant and remunerating harvests."

TO BE CONTINUED IN NEXT NUMBER.

AMERICAN CUTLERY.—It is truly gratifying to observe the progress, we, as a people, are making in the various departments of arts and science. The recent triumphs achieved by our countrymen at the World's Fair, will doubtless be followed by beneficial results, and will lead the way to still more creditable productions. Amongst the many commendable specimens of skill and ingenuity which have recently fallen under our notice, we know of none more deserving of notice, or in which the abilities of American workmen are more strikingly manifest, than in the superior cutlery from the establishment of the Waterville Manufacturing Company. Until within a few years, the idea of competing with the English cutlers was not to be thought of. Their superiority was universally acknowledged, and felt and it is but justice to them to say that the cutlery of England well deserved the praise it received. Now, however, Yankee ingenuity arrays itself in opposition to English skill and a most formidable rival it is. We saw a few days since a case of cutlery—fine knives principally, designed for exhibition at our State Fair, which for beauty of finish, elegance of design, and

goodness of quality, equals, we think, any English cutlery we have ever seen. For several years past we have used the pocket knives made by this enterprising company, and cheerfully testify to their fine quality. We want no better for any purpose. Their pruning knives are superior, and farmers will do well to examine them when about making a purchase.

To Contributors.

As the present number of our Journal has been somewhat delayed by the State Fair, we hope our contributors will bear the fact in mind, and forward at as early a day as practicable the articles intended for the December number. At the same time we take occasion to repeat our request to our friends to favor us with articles for our columns. We want facts—the experience and observations of our practical farmers. Do not let the fact that you are not in the habit of writing for publication deter you from attempting it. Give us the outlines and we will put them in shape. If men of observation and experience but knew how much they could aid us in our efforts to spread broadcast throughout our State valuable agricultural information, they would certainly lend a helping hand. A fact worth five dollars to one farmer, is equally valuable to another, and may be to ten thousand. We therefore repeat it, send along the documents and we will circulate them.

TILLINGHAST'S PREMIUM CHURN.—One of these excellent churns has been left at our office by the patentee. During the State Fair we had an opportunity of witnessing its operations. Excellent butter was churned with it in seven and a half minutes, in the presence of the Committee on Agricultural Implements, and we are assured by the proprietor, that this can be done at any time. The body of the churn is of the Ohio Iron Stone ware, most beautifully finished, and admirably adapted to that great essential in butter making—cleanliness. We shall be glad to show the churn to those who desire it, leaving them to test more fully its merits.

Worthy of Imitation.

We are pleased to learn that the Bucks county Agricultural Society, at their last exhibition, substituted the Farm Journal on their list, for the dollar usually given as a premium for certain articles. If the same plan were pursued by every other Agricultural society in Pennsylvania, our list would be largely increased. Our Bucks county friends have our warmest thanks for their kindness. We will endeavor to deserve it.

SUPERIOR FLOUR.—We are indebted to Mr. Benj. Snavely of Lancaster county, for a barrel of superb White Wheat Family Flour, manufactured at Stoll's Steam Mills, Lancaster City. We have tried it in various ways, and think it superior to any flour we have ever used in our family. If Mr. S. supplies all

his customers with an article of such quality, we imagine there are few complaints. Stoll's Mills were put in operation last spring, and now supply an excellent article of Farina, as well as all the products of grist mills generally, and we are pleased to learn are well patronized.

Reply of Mr. Bumstead.

ROXBOROUGH, Oct. 7, 1851.

MR. EDITOR:—In the last number of the Farm Journal, you call for an explanation of the “extravagant statement” in my letter, in my letter as published in Dr. Kerr's recent work on Poultry.

If you will examine the letter as there given, you will find, that what constitutes the pith of the paragraph has been (unintentionally no doubt) left out in the extract. The sentence from which the extract is made, is as follows: “Tell our Pennsylvania farmers that one Rooster and two hens of the Shanghai breed, will give them more eggs in three months time, of a *greater size and richer quality*, than five times that number of ordinary hens will do in one year and will hatch out a finer brood, with less trouble and more certainty, than any fowls they have heretofore possessed.”

The meaning of the paragraph is, that two White Shanghai hens, with the attendance of a good cock of the same breed, will lay more eggs of a *larger size and richer quality*, than five times the number of ordinary hens will do in one year; or, that so many hens of the ordinary breed will not lay as many eggs of the *same size and quality*.

That the sentence may admit of a different construction and such as might mislead those unacquainted with the habits of fowls, the writer willingly concedes. For this inadvertence he has no apology to offer. If, unfortunately, it has fallen into such hands, he has only to practise the duty he has taught to others, to confess their faults and make such explanation as the facts require.

He thinks, however, that there is some palliation for the supposed error, arising from the fact, that the letter was not designed for publication entire: but was furnished as a reference for the author of the book to glean some facts from, in relation to the Shanghai breed of fowls. He feels indebted to the editor of that work, for his kindness in inserting his letter entire, which was not expected, or he should have written the whole with a more careful construction.

So far as it regards the present extract, the writer embraces the only and the earliest opportunity which he has had, or could have, to correct the supposed error. Trusting that it may be received as a satisfactory explanation, by you and the readers of your Journal, I am with due respect,

Yours, &c.,

SAM'L. A. BUMSTEAD.

List of Articles

Exhibited at the State Agricultural Fair at Harrisburg, together with the names of exhibitors and place of residence.

We have been at considerable pains and expense to procure a full and complete list of all the articles exhibited at the State Fair, with the names of the contributors.

It will be more interesting, years hence, than at the present time, as it will serve to show the advance Pennsylvania makes in her Agricultural exhibitions. Our limits for the present month are too narrow to give the list complete; we shall conclude it in our next.

AGRICULTURAL IMPLEMENTS.

No. 1. Two-horsepower, Emory & Co., Albany, N.Y.
 2. Threshing machine, do. do. do.
 3. Circular for wood, do. do. do.
 4. No. 2, patent iron centre plow, Hall & Speer,

A. Speer, Pittsburgh, Pa.

5. No. 4, iron center plow, A. Speer, Pittsburgh.
 6. No. 5, do. do. do. do.
 7. No. 7, do. do. do. do.
 8. No. 10, do. do. do. do.
 9. Drill and broadcaster, grain and grass seed,

Lewis Moore, Lancaster co.

10. Cultivator teeth, D. B. Rodgers & Co., A. Speer, Pittsburgh, Pa.

11. Separator and horse power, Jeffrey Smedley, Columbia, Pa.

12. Grain fan, J. Montgomery & Bro.; J. Montgomery, Lancaster, Pa.

13. Grain fan, Lanphier & Jeffries, Lancaster.

14. Clover huller and cleaner, Jonathan Hibbs, Bristol, Bucks co.

15. Agricultural implements, Prouty & Barrett, Philadelphia.

16. Grain drill, Lee, Pierce & Lee; George W. Lee, Chester co.

17. Submerged water wheel, Myers & Seibert, Chambersburg, Pa.

18. Water wheel, do. do.
 19. Fanning mill, J. Bamboorongh, Lancaster.

20. Do. do. do. do.
 21. Model fanning mill, do. do.

22. Fanning mills, do. do.
 23. do. do. do. do.

24. do. do. do. do.
 25. Clew's fanning mill, Lorenzo Teed, maker;

J. N. Lacy, exhibitor, Wyoming co.

26. Carriage for plow, E. P. Cavert, Philadelphia.

27. Corn planters, do. do.
 28. Seed sower, do. do.

29. Grass cutter, do. do.
 30. Harvester, do. do.

31. Grass cutter, do. do.
 32. Grain rake, Perry Reber, Berks county.

33. Threshing machine, M. H. Steever, Harrisburg.

34. Corn sheller, Hanna & Carpenter; do. do.

35. Corn sheller, Hanna & Carpenter, N. Y., do.

35. Hay, straw and corn stalk cutter, George Newcomer, Carlisle, Pa.

37. Self-sharpening cultivator, do. do.
 38. Apple-paring machine, do. do.

39. Hay and straw cutter, John K. Landis, Lancaster county.

40. Willoughby's seed planter, J. Fulwiler, Cumberland county.

41. Huzzy's mowing and reaping machine, Garret & Co., makers, Myerstown, Lebanon county.
 42. Plows, R. Hall, Pittsburg.
 43. Hay, straw and corn stalk cutter, J. Rehr, exhibited by L. Clark, Harrisburg.
 44. Three plows, J. Bauman, Cumberland co.
 45. Grain fan, Charles Shreiner, do.
 46. Corn and seeding plow, W. Morrison, Carlisle.
 47. Smut mill, G. Heberlin, Quincy, Ill.
 48. Wheat drill, J. Mumma, Lancaster co.
 49. Corn sheller, J. Mumma, Greencastle, Pa.
 50. Cultivator, L. Lamborn, Ken't Square, Ches.co.
 51. Grain drill, E. Steacy, Lancaster co.
 52. Do. do. Jas. W. Fawke, do.
 53. Do. do. E. Wicks, do.
 54. Corn plow, D. Wolf, Lebanon county.
 55. Corn and seed planter, D. & H. Wolf, do.
 56. Coulter plow, S. Plank, Cumberland county.
 57. Cutter plow, do. do. do.
 58. Centre draught plow, do. do.
 59. Grain cradle, do. do. do.
 60. Bridge spring saddle tree, Smith & Hood, Cumberland co.
 61. Plow, R. & S. M. Scilar, Franklin county.
 62. Gap plow, do. do.
 63. Collar, S. W. Hays, Harrisburg.
 64. Double plow, J. B. Moore; H. Gilbert, do.
 65. do. do. H. Brown's; do. do.
 66. Four hand panel screws, do. do.
 67. Hay and manure fork, J. Schebel; J. Fisher, do.
 68. Plow, do. do.
 69. Threshing machine, Wheeler's patent, made and exhibited by Joseph Fout, Reading, Pa.
 70. Saw set and filing machine, Charles Lafferty, Adams co.
 71. Wheel plow, J. H. Cressler, Shippensburg, Pa.
 72. Butter, Mrs. Cressler; do. do.
 73. Two horse plow, J. B. Stoner, do.
 74. Grain cradle and rake, Christian Gingrich, Lebanon county; J. M. Beck, Harrisburg.
 75. Patent crotchet & lever stump machine, W. W. Willis, maker; W. H. Carr, Philadelphia, exhibitor.
 76. Grain drill, Jenkins & Lamb; Samuel Jenkins, Dauphin co.
 77. Separator and straw carrier, W. Pierpont; W. H. Carr, Philadelphia.
 78. Drill and broadcaster, W. H. Carr, Phila.
 79. Clover huller, W. O. Hickok; Lawrence & Sheetz.
 80. Grain planter, S. M. Pennock, Chester county.
 81. Smut machine, T. H. Wilson & Co. Harrisburg.
 82. Threshing machine, S. B. Haines, Lancaster.
 83. do. do. do.
 84. Shelf-sharpener Plow, do. do.
 85. Corn planter, R. J. Colvin, do.
 86. Child's grain separator, A. B. Child's; Charles Rumberg, Rochester, N. Y.
 89. Chopping mill for grain, J. D. Owens, Mifflin co.
 91. Clover huller, J. Howell, Juniata co.
 92. Premium churn, J. B. Tillington, Ohio.
 93. Churn, do. do.
 94. Clover machine, George Gardner, Adams co.
 95. German wagon, H. Lencker, Lancaster co.
 96. do. plow, do. do.
 97. U. S. grain fan, J. Roberts, Montgomery co.
 98. Corn planter, Samuel Witherson, Gettysburg.
 99. Clover huller, F. & A. S. Gilbert, Montgomery county.
 100. Feed cutter, do. do.
 101. Cultivator, J. Smedley; S. Pelton, Lancaster.
 102. Thresher and shaker, do.; do. do.
 103. Patent brick press, do. do. do.
 104. Fanning mill, Jacob Behel, Juniata co.

105. Plow, E. W. Carpenter, Lancaster.
 106. Plow, J. Pawling & Co., Montgomery co.
 107. do. do.
 108. Clover harvester, Mahlon Garretson, Adamson.
 109. Screen for grain seeds, Oliver Etmire, Huntington co.
 110. Grain seeder, H. W. Smith, Lancaster co.
 111. Clover hulling and cleaning machine, W. B. Gillson and Wm. Brackbill, Juniata co.
 112. Seven furrow plow, W. Sterrett, Juniata co.
 113. Straw cutter, A. Thompson.
 114. Grain drill, do.
 115. Hoisting machine, T. H. Willson & Co.
 116. Cut stave barrel, J. Green, maker; Abrm. R. Hursch, Cumberland co.
 117. Hay and straw cutter, Ira Smith, Chambersburg, Pa.
 118. Wheat fan, E. Watkins, Washington co.
 119. Excavator, Sweet's patent, H. Gilbert, Harrisburg.
 120. Improved plow, F. Zarracher, Lancaster co.
 121. Taylor's patent hames, Thompson & Taylor, Baltimore.
 122. Do. do. do.
 123. Do. do. do.
 124. Horse power corn stalk cutter and crusher, E. Potts, Chester county.
 125. Mill for grinding corn, S. W. Powell, Carlisle.
 126. Grain drill, Elias Landis, Mifflin co.
 127. Clover hulter and separator, A. B. Crawford, Wooster, Ohio.
 128. Clover seed cutter, made by Sevayer; John Winelbrenner, Harrisburg.
 129. Hope plow, J. D. Hope, Philadelphia.
 130. Horticultural implements, R. Buist, Philada.
 131. Hay cutter, C. B. Rogers, do.
 123. Vegetable cutter, do. do.

NOTE.—The implements exhibited by Prouty & Barrett, Landreth, and Whitman will be given in our next.

AGRICULTURAL PRODUCTION.

No. 1. Oregon seed corn, entered by A. O. Hiester, Susquehanna, Pa.
 2. Sample of field tobacco, Jno. H. Smith, Lancaster co., Pa.
 3. Sample of field tobaeoco, Jno. H. Smith, do.
 4. Quinees, C. S. Haldeman, Lancaster, co., Pa.
 5. Carrots, do. do. do.
 6. Turnip beets, do. do. do.
 7. St. Domingo tobacco, 8 or 10 years old, Jacob Gundy, Union co., Pa.
 8. Sample red beet, A. O. Hiester, Dauphin co., Pa.
 9. Tuscarora corn, do. do. do.
 10. Dutch flat turnip, do. do. do.
 11. Mercer potatoes, do. do. do.
 12. One bushel Australia wheat, Richard Pim, Chester co.
 13. Sample pink eye potatoes, H. W. Hoffman, Dauphin co.
 14. Sample sweet potatoes, do. do.
 15. 3 doz. bell peppers, do. do.
 16. Butter, C. P. Steinmetz, Annville, Lebanon co.
 17. Sample beans, do. do. do.
 18. Peas, do. do. do.
 19. Butter, Samuel Shelly, Adams co.
 20. Tobaeco, do. do.
 21. Yellow corn, do. do.
 22. Cabbage, do. do.
 23. 2 Red beets, 9 $\frac{1}{2}$ and 4 $\frac{1}{2}$ lbs. weight, Wm. Scheinhart, producer, Wm. Shelly, exhibitor, Adams, co.
 24. Tobacco, Geo. Crist, Middletown, Pa.
 25. Lot of vegetables, J. Haase, Dauphin co.
 26. Horseradish, Henry Cassel, Dauphin co.

27. Lot of vegetables, H. Jacks, Bedford co.
 28. Cotton plant, Daniel Needheimer, Cumberland co.
 29. Barrel of flour, Jno. R. Heck, Cumberland co.
 30. Celery, Geo. Olewine, Dauphin co.
 31. Wheat, 2 varieties, Dr. J. A. McCrea, Montgomery co.
 32. Tobacco, Geo. S. Wolf, York co.
 33. Cabbage, Samuel Grove, Dauphin co.
 34. Turnips, do. do.
 35. Ground seed corn, A. Noble, Carlisle, Pa.
 36. Flour of bluestem wheat, Hagey & Henniger, Cumberland co.
 37. Orange flour, do. do.
 38. Turban squash, Benjamin Kuhns, Delaware city, Delaware.
 39. Manna corn, J. Frantz, Lancaster co.
 40. Flat turnips, Geo. Reel, Dauphin co.
 41. Turnips, J. Reel, Dauphin co.
 42. Mercer potatoes, Mr. John, Harrisburg.
 43. White flint corn, J. H. Smith, Burlington, N. J.
 44. Lot of vegetables, Jno. Haase, Harrisburg.
 45. 1 bbl. Flour, extra, Jno. A. Ahl, Cumberland co.
 46. 1 bbl. Family flour, do. do.
 47. Ground corn, seed red cob, Jno. A. Reiley, Harrisburg.
 48. Basket of ruta baga, P. Stimmel, Harrisburg.
 49. Mangel beets, W. K. Verbeke, Harrisburg.
 50. White silesian beet, do. do.
 51. Cauliflower, do. do.
 52. Barrel of flour, Stolls Steam Mills, A. M. Spaniger, Lancaster.
 53. 3 heads of cabbage, A. K. Fahnestock, Harrisburg.
 54. Sample of pink eyes, Geo. Mayer, Dauphin co.
 55. Lot of carrots, Benj. Hood, Chester co.
 56. 1 bushel white flint corn, E. E. Boudinot, Philadelphia co.
 57. 1 bushel acclimated oregon corn, do. do.
 58. 1 bbl. flour, Geo. L. Eckhart, Lancaster co.
 59. Tobaeco, B. Hershey, Lancaster co.
 60. Radish, J. G., Lebanon co.
 61. Blue stem red wheat, J. Crawford, Franklin co.
 62. 1 bushel white rice wheat, Richard R. Peters, Atlanta, Georgia.
 63. Double ended corn, Francis Wilson, Lewistown, Union co.
 64. Lot of fruit trees, J. Conklin, York co.
 65. Red beet, J. Palmer, Mechanicsburg, Cumberland co.

CATTLE OVER TWO YEARS OLD.

No. 1. Duke Devon, A. Loomis, (for sale,) Wayne co., Pa.
 2. One grade bull, Red Rover, 2 years old, A. O. Hiester, Susquehanna, Pa.
 3. Cow & calf, cherry, over 2 years, A. O. Hiester, Susquehanna, Pa.
 4. Durham bull, 4 years, entered by Richard Parker, Cumberland co., Pa.
 5. Grade, 5 years, John Fox, Harrisburg.
 6. York breed, six years old, John Echternacht, Lancaster co., Pa.
 7. Buck Illinois, 4 years old, John Fishburn, Cumberland co., Pa.
 8. Devonshire, (mixed,) 3 years old, C. P. Steinmetz, Lebanon co., Pa.
 9. Duchess Holstein, (pure,) Zenus Barnum, Baltimore.
 10. Regina, Holstein, (pure) do. do.
 11. Lady Jane, mixed breed, 2 years and 2 months, J. Young, exhibitor, Harrisburg, Pa.

12. John Tarn, Devonshire, 5 years, Jacob Grossman, Lancaster co., Pa.	10 Ewes and 1 lamb, 7 mos. A. L. Bingham, Vermont, (for sale) 1 yearling imported.
13. Devonshire Ox, 6 years old, Frederick Keller, Lancaster co., Pa.	3. 4 Cotswold buck lambs, A. Clement, Philada.
14. Devonshire bull, 2½ years old, do. do.	4. 3 Cotswold ewes, do. do.
15. Durham heifer and calf 2 years old, H. Clement, Philadelphia.	5. Oxfordshire ram, do. do.
16. Great Durham cow, 4 years, do. do.	6. 3 y'g wethers, South down, J. Cope, W. Chester.
17. Durham heifer and calf, 3 years, do. do.	7. 3 ewes, do. do. do.
18. Durham cow, 5 years, do. do.	8. 4 ewe lambs, do. do. do.
19. Durham heifer, 2 years old do. do.	9. 1 buck and pen of ewes, do. do. do.
20. Durham cow and bull calf, 8 years, do. do.	10. South down yearling, A. Clement, Philada.
21. 1 yoke of Devons, 6 years, do. do.	11. 3 Cotswold sheep, 1½ to 3 years, Benj. Hood, Chester co.
22. ½ durham, heifer calf, do. do.	12. 3 wethers, 1½ to 2½ years, do. do.
23. 1 Durham heifer, 3 years. do. do.	13. 2 bucks, Cotswold and Leicester, do.
24. Dost Mahomed, 2 years, 3 mo., Gen. Harlan, Chester, co., Pa.	14. 1 buck, Cotswold, do.
25. Yoke of ½ Devon, 5 years old, entered by E. P. Horne, Baltimore, Md.	15. 3 ewes, Cotswold and Leicester, do.
26. English working cow, age 5 years, Henry Leneker, exhibitor, Lancaster co., Pa.	16. 3 ewes, Cotswold yearlings, do.
27. Buffalo working cow, 3 years old, do. do.	17. lambs, Cotswold and Leicester, do.
28. Victoria alderney, 6 years, Wm. R. Griffith, Harrisburg.	18. South downs, 18 mos. full bred, R. Ilare Powell, Huntingdon co.
29. Perry, short horned durham, 3 years, Wm. M. Henderson, Carlisle, Pa.	19. Leicester, 18 mos. do. do. do.
30. Jesse, devon and durham, 7 years, entered by J. Evans, York.	20. South downs, 6 mos. do. do. do.
31. Cherry, durham, 5 years, do. do.	21. Duke, South down, 6 mos. do. do. do.
32. Rosa, durham, 3½ years, do. do.	22. Leicester crossed with South down, 3 yrs. do.
33. Sally, durham, 3 years, do. do.	23. Defiance, South down, 3 yrs. do.
34. Bradford, Jr., durham, 5 years, do. do.	
35. Bradford, 3d, durham, 2 y., 4 m., do. do.	
36. Silk stocking durham, 8 years do. do.	
37. Durham, 5 years old, do. do.	
38. Durham, 4 years old, do. do.	
39. ½ Devonshire, 7 years old, calf 4 weeks, entered by Philip Dougherty, Harrisburg.	
40. Jenny Devonshire, 2 years, 5, months, S. W. Sharp, Cumberland co., Pa.	
41. Yoke of oxen, Devon, 4 years, James Gowen, Philadelphia co., Pa.	
42. Rockland, durham, 3 years, do. do.	
43. Montezuma, durham, 6 years, Paschal Worth, Chester co., Pa.	
44. Duchess, durham, 3 years, Paschal Worth, Westchester, Pa.	
45. Durham bull, 2 years, 10 months, Oliver Rice, exhibitor, Perry co., Pa.	
46. Cow and calf, common breed, 10 years, Oliver Rice, Perry co., Pa.	
47. Cow and calf, common breed, 5 years, Oliver Rice, Perry co., Pa.	
48. Cow and calf, durham breed, 2 years, Frederick Barnett, Bloomfield, Pa.	
49. Durham bull, 3 years, do. do.	

SWINE.

No. 1. Sow six mos. old, L. P. Hoopes, Chester co.	2. 5 shoats, three mos. do. do.
3. 7 shoats, seven weeks, do. do.	3. nineteen foreign varieties.
4. Chester co. 16 weeks, J. J. Hickman, do.	Of Apples, Mr. M. Snyder brought the Bellflower, Hayes, Pennock, Catharine and Smoke-house; John Perkins—Ridge Pippin and Pennock; B. F. Hedges—a seedling from the Bellflower, and from J. W. Bailey, Plattsburg, N. Y., the Bailey's Spice and Saille Autumn; from J. C. Hastings, an unknown kind; from Matthew Mackie, Clyde beauty, and from —, N. Y., Bailey's Spice, Fall Harvey, Jack, Jowett's Red, Late Strawberry, Melon, Minister, Northern Spy, President, Sponge and Sweet Baldwin. Of vegetables there were five Esculents. The following pre-
5. 8 shoats, Wm. Ashbridge, do.	
6. Jim Hyer, Spanish breed, 14 mos., S. W. Sharp, Cumberland co.	

7. Chester white, 4 mos. and 18 days, R. H. Powell, Huntingdon county.

SHEEP.

No. 1. South down, 2 years, Hon. Geo. W. Woodward, Luzerne county.	
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Horticultural Societies.

Proceedings of the Pennsylvania Horticultural Society.

The stated meeting of this Society was held in the Lecture Room of the Museum building, on Tuesday evening, October 21, 1851, Dr. W. D. Brincklé in the chair. The displays of fruit and vegetables was rich. Of plants there was one collection of interesting green-house specimen from Robert Buist's houses—but the most admired object was a cut of the *Victoria regia*—this specimen was the most beautiful shown before the Society. A number of handsome baskets of cut flowers and very superior cut seedling Dahlias from Gerhard Schmitz and Mrs. Smith, and Bouquets were exhibited. Of Fruits, there were Grapes—very large bunches of the white Syrian from A. B. Fiden, Tacony; Black Hamburg from H. W. S. Cleveland, Burlington, N. J.; Black Morocco from the President, and Decandolle from Miss Gratz. Of Pears there was a fine show, many of them luscious; by Isaac B. Baxter, very large and perfect Duchesse d'Angoulême; by Mrs. Jno. B. Smith, Passe Colmar, Sieulle, Duchesse d'Angoulême, Beurre d'Arenberg, and Holland green. By the President, the Beurre Biel Sieulle and Bleeker's Meadow; and unknown varieties by A. M. Eastwick and A. Felton, Jr., by Edmund Jones, the Jones' and from other sources; from C. B. Lines, New Haven, the Calhoun, Jones' Winter, Jones' December and January; from J. C. Hastings, Clinton, Onieda co., N. Y., Fredricka Bremer; from Mathew Mackie, Clyde, Wayne co., N. Y., the Sheldon; from J. P. Cushing, Boston, Doyenné Gris; from Jno. P. Wilder, Boston, six native and nineteen foreign varieties. Of Apples, Mr. M. Snyder brought the Bellflower, Hayes, Pennock, Catharine and Smoke-house; John Perkins—Ridge Pippin and Pennock; B. F. Hedges—a seedling from the Bellflower, and from J. W. Bailey, Plattsburg, N. Y., the Bailey's Spice and Saille Autumn; from J. C. Hastings, an unknown kind; from Matthew Mackie, Clyde beauty, and from —, N. Y., Bailey's Spice, Fall Harvey, Jack, Jowett's Red, Late Strawberry, Melon, Minister, Northern Spy, President, Sponge and Sweet Baldwin. Of vegetables there were five Esculents. The following pre-

miums were awarded by the Committee on Plants and Flowers: For the best hand Bouquet, to Robert Kilvington; for the best basket of cut Flowers, to James Berset; for the second best basket, to Robert Scott; and a special Premium to John Ellis, gardener to Caleb Cope, for a basket of choice cut flowers among them, the Victoria regia, a truly beautiful flower; also a special Premium to Robert Buist for a display of Plants in pots. The Committee noticed a specimen of *Yucca gloriosa* from the garden of Judge Kane, and a fine cut seedling Dahlia, by Gerhard Schmitz and Mrs. John B. Smith. By the Committee on Fruits—for the best twelve named Pears, to Isaac B. Baxter; for the second best, to Mrs. Jno. B. Smith; for the best twelve Apples, to M. Snyder; for the second best, to J. W. Bailey, and special Premiums for fine Grapes to John Ellis, H. W. S. Cleveland, John Gallagher and Wm. Warnock.

By the Committee on Vegetables special premiums; for the best and for the second best display by a market gardener to Anthony Felton, Jr.; for the best by a private gardener to Maurice Finn; for the second best, to Thomas Mahan, gardner to A. M. Eastwick, and for the third best to John Gallagher, gardner to Miss Gratz.

Special Report: The Committee on Plants and Flowers report, that on the 28th August last, they visited Spring Brook farm, the Country seat of Caleb Cope, and examined the wonder of the vegetable kingdom, the far famed Victoria regia. Without entering into an elaborate description, your Committee beg leave to say, that they found the plant growing in a circular tank, some 24 feet in diameter, in a beautiful and costly house, constructed expressly for its growth and display. At the time of our visit, the plant exhibited five mature leaves and one embryo leaf, all floating on the surface; the mature leaves measured 6 feet and 5 inches in diameter, they are perfectly round, some of them have the margin turned up, presenting a most singular appearance. In colour they are a beautiful light green, the underside of the leaves with their immense rope-like foot stalks is of a dark purple hue, and literally covered with strong spines, inclining, to the centre of the leaf.—The embryo leaf with its array of dark spines presents a formidable aspect and from the singular manner in which it is folded up, is not the least curious part of this superb Water Lily. The flower is immense, rising a few inches above the surface to display its many pure white petals, it is beautiful. As the expansion proceeds, it assumes in the inner petals, a fine rose color, it is then magnificent. The flower when expanded, measured seventeen inches in diameter.

From the germination of the seed on the 10th of April, until the first inflorescence of the plant on the 21st August was but a period of a little over four months. When we consider that the plant was entirely unknown in this country, its habits but partially understood, and its cultivation a mystery, we are surprised at the success of the experiment.

Your Committee are proud that the first flowering of this Queen of Aquatics in the United States was produced by the liberality and munificence of a member of the Pennsylvania Horticultural Society: aside from which, the influence to be expected from so munificent an expenditure in the field of Horticulture, will give a new impulse to persons of wealth—the example set will create a desire to do likewise.

Your Committee recommend that the Society's Gold Medal be awarded to Caleb Cope, for his liberality in having brought to mature growth the Victoria regia, to which the Society unanimously assented.

The reports of the Committees of Superintendence and the Committees appointed to award premiums at the twenty-third Exhibition were read, and the special awards approved of. The Committee on flowers and designs recommended a special premium of twenty-five dollars to John Ellis, gardener to Caleb Cope, for skill shown in cultivating the Victoria regia.

Tuos. P. JAMES,
Recording Secretary.

WEST PHILADELPHIA, Sept. 25. 1851.

The second annual exhibition of the Hamilton Horticultural exhibition which has just closed, exceeded in every respect the expectations of its most sanguine friends. The drought which has prevailed in the surrounding country during the past summer, so dried up all vegetation, that it was judged by many inadvisable to hold an exhibition, notwithstanding which, the society determined to do the best they could towards having one, and they succeeded handsomely, and very creditably to themselves and their numerous contributors.

There not being in all West Philadelphia a public hall large enough to accommodate such an exhibition, the Society accepted Mr. N. B. Browne's kind offer of his house and grounds, which are admirably adapted for the purpose. The eyes of the numerous visitors were feasted with a profusion of the products of the earth in endless variety—from the mastodon pumpkin to the potato of half an inch in diameter—from Mr. Cope's gigantic leaf of Victoria Regia to the humblest specimen of pot plant, all arranged with the greatest possible taste and beauty. Bouquets in great abundance and every conceivable shape and size, and several very large and handsome designs of cut flowers, betokened that the society was under great obligations to the fair sex. So tempting was the display of fruits as to cause innumerable breaches of the tenth commandment, and not a few of the eighth, as was evident from the diminished state of some of the baskets after the exhibition. So far as we could learn, every one of the visitors went away gratified, and every thing passed off with the greatest order and harmony.

The previous exhibition of this infant society was held in September, 1850, at the house of Wm. W. Keen, Esq., its Vice President, and though a very handsome display, was surpassed by this one.

It is expected that the Odd Fellows Hall which has just been commenced, will be finished in time for the next autumnal exhibition, so that the society will not again be compelled to trespass on private generosity.

T.

We are indebted to the Hon. Thomas Ewbank, Commissioner of Patents, for a copy of the Patent Office Report for 1850-51, and to the Hon. Thaddeus Stevens for a similar favor. We have also received several parcels of wheat from the Patent Office which we have placed in the hands of excellent farmers.

Book Notices.

A Practical Treatise on Manures. From the recent publication of the British Society for the diffusion of Useful Knowledge; with Additional notes by the American Editor. Philad. E. S. Jones & Co. pp. 204.

As manures must be derived from mineral, vegetable, or animal substances, a treatise which is devoted to the subject in its three departments can be used in every country, no matter where it was originally printed,—thus differing from those books on agricultural subjects which must be adapted to the circumstances of each locality. This book therefore, although prepared under the auspices of a celebrated English society, goes so fully into the various branches of the subject, American farmers will find much in it exactly to their purpose—and they do not require to be told how much depends upon judicious manuring.

The book is valuable, because besides giving an account of an infinity of manures adapted to various localities, it gives directions for employing them to the best advantage.

The subject is divided into eighteen chapters the contents of which are stated in such a manner as to enable the reader to find what he wants, without reading large portions of the whole.

The mechanical execution is creditable, and the book will be a valuable addition to the library of the farmer.

Graham's Magazine, for November, is on our table, and as usual filled with excellent contributions and beautiful plates. The efforts of the publishers to please the various tastes of their thousands of readers are unceasing and we have reason to think fully appreciated.

Godey's Lady's Book, for November, has been received. The illustrations are of a superior character both in design and execution, while the contents are admirably adapted to their lady readers. Those of our readers who desire a publication devoted to polite literature, will not be disappointed in subscribing for *Godey's Lady's Book*.

REPORT OF COMMITTEE ON IRON SAFE.

State Fair Ground, Oct. 30, 1851.

THE undersigned appointed a committee for the purpose, by the officers of the State Fair, were present this afternoon when Messrs. Evans & Watson tested one of their small sized Salamander Fire Proof Chests, at which time they consumed three cords of wood on it, commencing at 1 o'clock, P. M., and having exposed it to a white heat for two hours, sufficient to destroy the cast iron feet.

On opening the chest the papers deposited in our presence were taken out, not only having been preserved, but not having even the appearance of a scorched upon them.

The safe was exposed to the disadvantage of being cooled, by having a stream of cold water played upon it.

JOSEPH RITNER,
A. O. HIESPER,
A. T. NEWBOLD,
JOHN B. COX,
CHARLES E. HUESTER,
E. E. BOUDINOT,
Committee.

Mr. Stevenson's Address.

At the moment of going to press we received a copy of the address delivered before the State Agricultural Society at Harrisburg. We regret that we have neither time to speak of its merits, nor space for it in our columns. Better judges than ourselves speak highly of it, and we have no doubt that it is a document that will be read with interest and profit by every farmer in Pennsylvania.

TO INVENTORS AND PATENTEES.

J. DENNIS, Jr., Practical Machinist, Manufacturer, and Draughtsman, having had twenty years' experience in building and operating machinery for manufacturing Cotton, Silk, Wool, Steam Engines, Printing Calico, &c., with several year's experience in procuring patents, tender his services to inventors to make examinations of their inventions from a rough sketch or drawing and limited description, (which may be forwarded by mail,) and compare them with the inventions in the Patent Office and give an opinion, whether the invention is patentable or not, for a fee of \$5; and save the inventor the expense of applying for a patent, which usually costs \$30, exclusive of the cost of model, as only about two-fifths of the patents applied for are granted.—His experience in making drawings of, and building and operating machinery, enables him to understand an invention from a rough drawing and limited description, and to comprehend the points in which the invention differs from those already patented, with the greatest facility. He also prepares drawings, specifications, covenants and assignments, or procures copies from, or attends to any business connected with the Patent Office. Counsellors in Patent cases can have an opinion by stating the points in their case, and arguments prepared with the proper authorities cited, to sustain the same, with despositions if necessary. He will also attend as Counsellor or Advocate in Patent causes in any Court.

Notice to 2,447 inventors whose applications were rejected in 1849 and '50, that he will examine their cases for \$5, to ascertain if the referees will prevent obtaining a patent, if a proper claim is presented, and advise the applicant whether he had best withdraw or amend his papers, and get a reconsideration, or *Appeal*, or *File a Bill in Equity*. As he is the only attorney in this city, (Washington, D. C.) who has succeeded in *reversing* the Commissioner's decision by an *Appeal* to the Chief Justice.

Office near the Patent Office, Washington, D. C. Letters, Sketches, and Drawings, sent by mail, (postage paid) containing fee, will be promptly attended to.

TERMS OF PENNSYLVANIA FARM JOURNAL

In order that the FARM JOURNAL may be placed within the reach of every one who feels interested in the progress of Agriculture, we ask attention to the following terms:—

SINGLE COPIES,	-	\$1 00	Per Annum.
FIVE "	-	4 00	" "
TEN "	-	7 50	" "
TWENTY "	-	15 00	" "

It is not required that all papers in a club should be sent to one office. We will mail them (in wrappers,) to as many different offices as may be necessary. We make this arrangement in order that persons residing in different neighborhoods may unite, and form large clubs, and thus secure the "JOURNAL" at the very lowest club rates.

Our Terms are CASH IN ADVANCE. The exceedingly low rate at which the Journal is furnished renders this imperative. Subscriptions may be sent at our risk, and money at par where subscribers reside, will be taken. Where the sum to be sent is large we prefer that a draft should be procured, if possible.

Subscribers and Post Masters are invited to act as Agents. A receipt will always be sent with the first number of the copy subscribed for.

All letters must be addressed, *post paid*, to the publisher.

A. M. SPANGLER,
Lancaster, Pa.

GUANO,

PERUVIAN and Patagonia Guano for sale in lots to suit purchasers, by J. CASSEY & SON.
No. 121, South Water st., a few doors above Dock st., Phila.

CLOVER HILL FARM FOR SALE.

Situated in Carroll county, Md., four miles west of Reisterstown, and eight miles east of Westminster, on the Westminster turnpike, and adjoining the village of Finksburg, will be offered by the undersigned at public auction at the premises, on SATURDAY, the 25th day of OCTOBER, 1851, the day after the Baltimore Agricultural Fair.

This well known and celebrated farm is only twenty miles from the city of Baltimore, and runs to within a few hundred yards of one of the best turnpike roads in the state of Maryland. It contains upwards of FIVE HUNDRED ACRES, and if not sold entire, will upon the day of sale be offered in three tracts.

No. 1, Contains about 200 Acres, an equal proportion of Wood and Meadow Land, and upon which about 70 tons of hay was cut in the past season. The buildings are very superior. A two-story MANSION, 50 by 40 feet, with basement under the whole house. A substantial stone Tenant House; a large stone Barn, with shedding and corn crib, wagon house, &c.; with a large ORCHARD, containing several hundred Fruit Trees, of every variety of the most carefully selected kinds. Water of the best quality in the barn yard—in the dairy—in the kitchen—in the garden, and in the field on the place; and can by pipes be carried into the garret. In a word, the buildings are of the first order, and the Land in the highest state of cultivation, having produced this year a crop of grass and corn equal to the best Pennsylvania land. A clay subsoil retains every description of manure, and a kinder soil, or one more durable cannot be found.

No. 2, Contains not quite 200 Acres of the same high quality of soil, with a full proportion of Wood and Meadow, and a never failing spring of the best water in every field. A portion of this, like the former, has within two years been heavily dressed with lime and chemical salts. The land has on it a Lime Kiln, and adjoins the flourishing village of Finksburg, and within a short distance of the best copper mine in the State.

No. 3, Contains about 130 Acres, with numerous and never failing springs of water, an abundance of wood and similar soil.

Beaver Run, a beautiful stream, with a valuable water power, runs directly through the place. The land is in a highly productive state—the fine natural quality of the soil is known, and will be attested to by the whole neighborhood; and those wanting land would help themselves by giving these farms an examination.—Any farmer of experience who once sees will appreciate them.

Any information wanted will be promptly afforded by writing to John Kettlewell, Baltimore, or E. Gover Cox, Finksburg, Carroll county, Md.

Terms will be liberal and made known upon the day of sale, and the property will be sold if an offer is made within any thing near its valuation.

KETTLEWELL & COX.

FRUIT & ORNAMENTAL TREES & SHRUB-BERRY.

The subscribers offer for sale at the Nursery and Garden a large and fine assortment of *Fruit and Ornamental Trees and Shrubbery*, embracing many new and valuable varieties in each department, which they can supply in large or small quantities, viz:—Apples, Pears, Peaches, Plums, Cherries, Apricots, Nectarines, Figs, Filberts, French and Spanish Chestnuts, English and other Gooseberries, Currants, Raspberries and Strawberries in variety; English Walnuts, Quinces, Asparagus roots, Osage Orange for hedging, Cranberries, &c., also Evergreen and Deciduous Trees & Shrubs, of native and foreign growth, many of them of recent introduction from abroad, such as Deodar cedar, Cedar of Lebanon, New Japan Cedar, Himalayan Spruce, Chili Pine, New Junipers, several varieties of Yew, &c., &c. Honey-suckle Vines and other creepers, Pawpaw Pears on Quince, of fine size and quality, for immediate bearing, Cherries on Mahaleb, also *Hardy Perpetual Roses*, a large assortment; *Verbenas*, *Dahlias*, *Phloxes*, *Chrysanthemums*, Bulbous roots, assorted, *Tulips*, *Hyacinths*, double and single *Grasse Vines*, Box Edging and Green House Plants.

Trees and Plants delivered in Philadelphia, carefully packed free of charge, and despatched thence by public conveyance to any part of the Union. Orders by mail carefully attended to; catalogues furnished gratis, or may be obtained of A. M. Spangler, publisher of Farm Journal, in Lancaster, who will receive orders.

At our Agricultural and Horticultural Warehouse, we can also supply all kinds of improved Agricultural and Horticultural implements, also Field, Garden and Flower seeds, fresh and genuine—Country Storekeepers supplied at reduced prices wth seeds, neatly put up in papers for retail sales.

PASCHALL MORRIS, & CO.
West Chester, Pa.

Seed and Agricultural Warehouse.

No. 29. Market Street, Phila.

WHERE the subscriber has opened an extensive assortment of GRASS AND GARDEN SEEDS, of his own raising, or recent importation, and warranted to be as represented.

He is, also, manufacturing all the most approved Agricultural Implements, among which he would call the attention of Farmers to a new article of Plow, of his own invention, called Cast-Steel, Extending Point, Self-Sharpening, Surface and Subsoil Plows, which for durability and easy of draft is yet unequalled.

The great advantages these Plows possess over all others, are their peculiar construction and the substitution of Cast-Steel in the place of Cast-Iron, which only waits to be seen to be appreciated; all of which will be sold on the most reasonable prices by

May, 1851.

C. B. ROGERS.

FRUIT AND ORNAMENTAL TREES FOR SALE

At the Fair-View Nurseries Moorestown, Burlington Co., N. J.—50,000 Apple Trees, from 8 to 10 and 12 feet high, embracing about 150 Select Varieties, ripening in succession from the earliest to the latest. Also, a large quantity of Peach, Cherry, Pear, Plum, Apricot, Nectarine, Almond, Quince, Grape Vines, &c. The Fruit Trees have principally been worked from standard trees, which leaves but little room to doubt as to the correctness of the Fruit, which has taken the premium at the Pennsylvania Horticultural Society and others for the last ten years.

50,000 Deciduous and Evergreen Ornamental Trees and Shrubs, such as Sugar and Silver Maples, American and European Mountain Ash, Lindens, Horse-Chesnuts, American Larch, of a large size, suitable for road and street planting; Balm Gileads, Norway Firs, Arborvitae, Pines of different varieties, Junipers, English and Irish Yew, Cedars of Lebanon, Double and Single Spirea, suitable for Cemeteries, Lawns and Private Yards; Borders, etc.

A liberal Discount will be allowed to persons who buy to sell again. Descriptive Catalogues furnished gratis to post-paid applicants.

JOHN PERKINS, Proprietor.

THE MODEL SEED STORE.

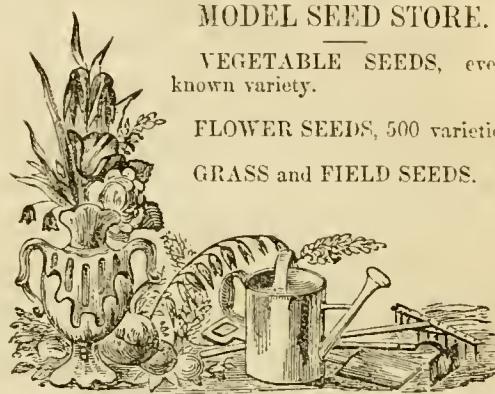
300 Market street, above 8th street, Philadelphia.

MODEL SEED STORE.

VEGETABLE SEEDS, every known variety.

FLOWER SEEDS, 500 varieties.

GRASS and FIELD SEEDS.



Agricultural and Horticultural Implements.

THOMAS F. CROFT, Proprietor.

Agent of Penna. Farm Journal.

TO FARMERS ?
LANPIEAR & JEFFERIES.

RESPECTFULLY invite the attention of Farmers and others to their Establishment for the manufacture of Farming Implements and especially to their celebrated

IMPROVED GRAIN FANS,

which they confidently assert will do more work in a shorter space of time, and with less labor, than any other Fan now in use. These Fans, wherever introduced, have given complete satisfaction, and a large number of testimonials could be procured, testifying to their superior merits.

They also manufacture, to order, Agricultural Implements of various kinds: such as *Straw Cutters*, *Cultivators*, *Ploughs*, *Harrows*, &c.

Having had many years' experience in the best shops in the country, they are prepared to do work of a superior quality a little cheaper than any other establishment in the State. They will warrant all their work to be what it is represented. A warrant given with every Grain Fan, giving the purchaser the privilege of returning it, should it not do good and quick work.

They will deliver them, free of expense, any distance within fifty miles of the manufactory. Their Shop is at the junction of the Marietta and Columbia Turnpike, Lancaster, Pa., where they will be happy to have Farmers call and examine for themselves. Price of Fans, No. 1, large size, \$21.00
" " " 2, small size, 22.00

Several good and responsible Agents wanted in the Western and Middle part of Pennsylvania, to whom a fair percentage will be allowed. All orders addressed to Lanpier and Jefferies, Lancaster Pa., will meet with prompt attention. June 1st.

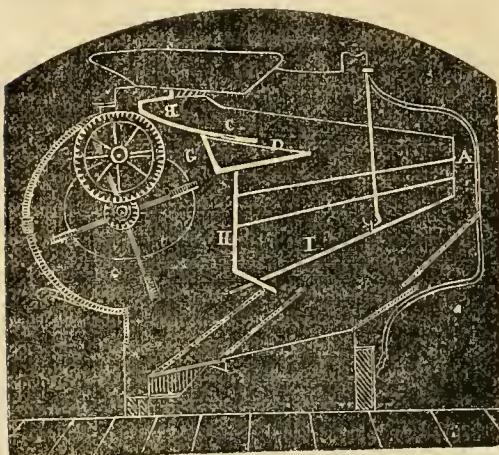
STRAWBERRY PLANTS.

THE subscriber offers for sale 4000 young and thrifty Strawberry plants at low prices. This and the following month being the proper time to form new beds to beat fruit the following year.

J. P. HENIFISH

Aug 1, 1851.

No. 18, East King St., North side, Lan.



MONTGOMERY'S UNRIVALLED IMPROVED ROCKAWAY SCREENER.

This celebrated FAN has been thoroughly tested and found to excel all others now in use for clearing the different kinds of grain.

This improvement by Montgomery & Brother, consists in a double shoe—the larger shoe—A as commonly attached to winnowing machines, having grooves into which the screens, sieves or sieve boards are slid and rest.

B. The curved apron upon which the grain falls after passing through a hopper above.

C. The door which is made to extend across the curved apron B, and opening back on hinges towards the front end of shoe A, rests flat upon the front part of the apron B. The grain passes along the curved apron B and through the aperture of the door C and falls upon the screen D underneath. The apron is carried over the screen D on to the screen underneath, whilst the screenings pass through the screen D into the shoe G underneath, and are carried along the bottom of the shoe G to the centre, where a spout II receives the screenings and carries them down behind into a box below the bottom of the shoe A. The grain is carried back on to the grain board underneath perfectly screened.

The persons who have already used these GRAIN FANS have not only spoken in flattering terms of them, but prefer them to all others they have used—and very many of the best Agriculturists have given their certificates that the fact of these machines screening the grain twice by one and the same operation is the very improvement they have long desired. Our farmers will now have the most perfect winnowing machine, which spreads the grain over the upper screen more perfectly than any others now in use. This improvement is so valuable as to have induced the inventors and manufacturers to make application for Letters Patent.

All orders for the machines will be promptly attended to by the undersigned.

J. MONTGOMERY & BROTHER,
Lancaster city, Pa.

THE FRUIT-GROWER'S HAND-BOOK.

Encouraged by the very warm commendations of this work, received alike from experienced Horticulturists and from the wholly inexperienced, the author ventures with some confidence to submit it to the public at large.

Notes of all the important questions on fruit culture asked of the writer during the last ten years, with a thorough research of Pomological works, have contributed to render this volume as complete as possible, in convenient compass.

To the lot-holder who wishes to make the most of a few plants and little room, as well as to the extensive planter who wishes to arrange and cultivate his gardens in the most economical and profitable manner, the Hand Book will be found a useful companion for frequent reference.

ONE DOLLAR, FIFTY CENTS. Two copies, post free, for \$1.
Address, WM. G. WARING,
sept. 1851. Botsburg, Centre co., Pa.

DOUBLE-ACTING, LIFT AND FORCE PUMPS

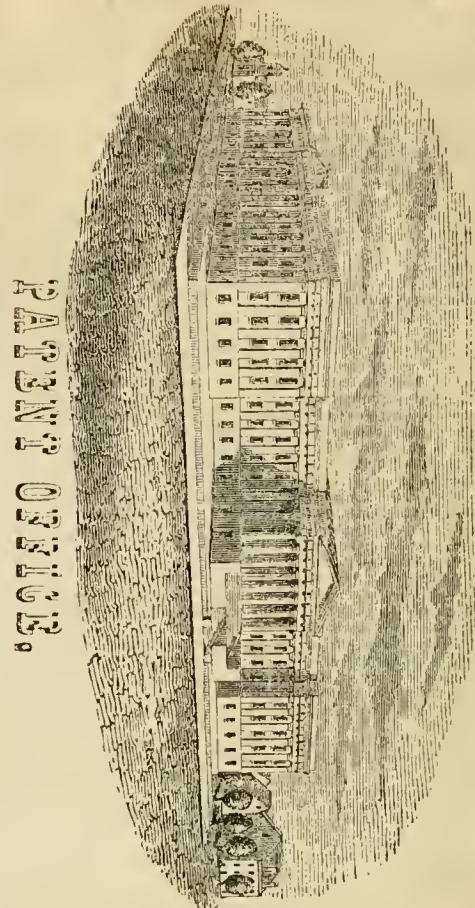
The subscriber manufactures Double-acting Lift and Force Pumps, of all sizes, for Factories, Mines, Railway Water Stations, Breweries, Steamboats, Steamships, Tin Works, Ships, Water Boats, Hot Liquids, Family Purposes, &c.

VILLAGE AND FACTORY FIRE ENGINES.

Garden Engines, Cistern Pumps, Well Pumps, for any depth required, Hose Couplings, Copper Riveted Hose of all sizes, Ornamental Cast-iron Fountains, &c.

Purchasers are respectfully invited to call.

Any communications by mail will have immediate attention.
G. B. FARHAM, 34 Cliff st., near Fulton, N. Y.



PENNA. PATENT AGENCY OFFICE.

Inventors and others, having business to transact at the United States Patent office, are hereby informed, that the undersigned will attend promptly to all business connected with said office, and will complete Perspective and Sectional Drawings, and all requisite papers, Caveats, Specifications, Disclaimers, Assignments, &c. and make the proper applications for the securing of Letters Patent, according to law.

MACHINISTS AND INVENTORS

will save time, trouble and expense, by first consulting him, and the strictest secrecy will be observed, relative to their inventions and claims.

The office is at present located in Centre Square, two doors south of the Lancaster Bank, where the list of patents granted since the year 1790 to the present day can be examined, together with numerous specifications, drawings and models, and every information obtained relative to the laws and rules of the U. S. Patent office.

All the requisite papers, drawings and models will be promptly and carefully forwarded to Washington city, free of charge by

J. FRANKLIN REIGART, Lancaster, Pa.

Life Insurance for Horses, &c.

THE American Live Stock Insurance Company, (Stockholders individually liable) for the Insurance of Horses, Mules, Prize Bulls, Sheep, Cattle, &c., against Fire, Water, Accidents and Disease. Also, upon Stock driven to Eastern markets, or transported South.

JOHN H. FRICK.

General Agent for Pennsylvania, Philadelphia.

REFERENCES :

Wood, Abbott & Co.,
Truitt, Brother & Co., Philadelphia,
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Agents :

JOHN ZIMMERMAN, Lancaster Pa.

CHARLES F. FRICK, Reading, Pa.

SAMUEL H. TAYLOR, March Chink, Pa.

Dr. JOHN G. SCOVEN, Veterinary Surgeon,
May, 1851) Examiner for Lancaster County.

Wm. B. WILEY, Job Printer, Lancaster, Pa.

FARMERS PROTECT YOUR HOUSES & BARNs.

So many accidents have happened from lightning during the past Summer, that every prudent and careful farmer should at once adopt such means as will be most effectual in preventing them—When it is remembered that certain safety may be secured at a very trifling expense, it becomes the duty of every farmer and good citizen to avail himself the proffered means. By so doing, he not only secures his property from fire by lightning, but protects also his family and those around him. These are important considerations and should have great weight. Those who desire a Lightning Rod, pronounced by the first Scientific men in our country, the very best in use, will find it on application to THOS. ARMITAGE, at his *Magnetic Lightning Rod Factory*, Vine Street, 3 doors above 12th, Philadelphia. These Rods are finished with all the improvements at nearly the same prices as the old kind. (11.)

PAGE'S CIRCULAR SAW MILLS.

GEORGE PAGE & CO.

Shroeder street, between Baltimore and Fayette sts.,
Baltimore.

Manufacture to order, *Page's celebrated Portable Patent Circular Saw Mills*, with horse or steam power, of several sizes. They also manufacture Sawing and Planing Machines for railroad work, Threshing Machines, GRIST MILLS for farm purposes, Corn and Cob Crushers, Tanning Machines, SEED AND CORN PLANTERS, IMPROVED HORN-E POWERS, CORN SHELLERS, Augers for boring wells, augers for boring fence posts, water wheels, forcing pumps, &c.

They respectfully solicit a share of public patronage, and would be permitted to remark, that their Circular Saw Mill can do more work—a-ye, twice as much work as any other mill with the same amount of power, and do it better.

(sept-9)

PHILADELPHIA & LIVERPOOL LINE OF PACKETS—To sail from Philadelphia on the 15th, and from Liverpool on the 1st of each month.

	From Phila.	From Liverpool
Ship SHENANDOAH	April 15th	June 1st
Capt. W. P. Gardner.	Aug. 15th	Oct. 1st
	Dec. 15th	Feb. 1st
New ship WESTMORLAND	May, 15th	July 1st
Capt. P. A. Decan,	Sept. 15th	Nov. 1st
	Jan. 15th	Mar. 1st
New ship SHACKMAXON,	June 15th	Aug. 1st
Capt. W. H. West.	Oct. 15th	Dec. 1st
	Feb. 15th	April 1st
Ship MARY PLEASANTS,	July 15th	Sept. 1st
Capt. R. R. Decan,	Nov. 15th	Jan. 1st
	March 15th	May 1st

The above first class ships are built of the best materials, and commanded by experienced navigators. Due regard has been paid to select models for speed, with comfort for passengers. They will sail punctually on the days advertised, taking advantage of the steam tow boats on the Delaware.

Persons wishing to engage passage for their friends, can obtain certificates, which will be good for twelve months.

Passage to Liverpool in the cabin,	\$80
" Forward cabin,	20
" " Steerage,	12
Passage from Liverpool in the cabin,	100
" Forward cabin,	25
" " Steerage,	20

Those who wish to remit money, can be accommodated with drafts for £1 sterling and upwards, at sight, without discount. Apply to GEO. McHENRY & CO.

June 1, 1851. 37 Walnut street.

R. BIUST,

NURSERYMAN & SEED GROWER; HAS always on hand at his seed Store, 97, Chestnut Street, Philadelphia, a large stock of Seeds of his own growth, a very important item to purchasers, as he is a practical grower, and has been engaged in his profession over 30 years. His nursery ground is amply stocked with Fruit, Shade and Ornamental Trees, accurately named and properly cultivated. Every article sold at the lowest rates and warranted to be as represented.

Seed Store, 97 Chestnut Street, Philadelphia. Nurseries and Seed Farm, Darby Roads, two miles below Gray's Ferry.

June 1, 1851. R. BIUST.

HENRY L. TRIPLER,

(Successor to Joseph P. H. Coates.)

Dealer in Grass and Garden Seeds.
No. 49, Market Street, Philadelphia.

JOURNAL OF THE FRANKLIN INSTITUTE,
of the State of Pennsylvania, for the promotion of the
Mechanic Arts.

THE oldest Mechanical Periodical extant in America is published on the first of each month in the City of Philadelphia. It has been regularly issued for upwards of twenty-five years, and is carefully edited by a committee of scientific gentlemen appointed for the purpose, by the Franklin Institute.

The deservedly high reputation, both at home and abroad, which this Journal has acquired and sustained, has given it a circulation and exchange list of the best character, which enables the Committee on Publications to make the best selections from Foreign Journals, and to give circulation to original communications on mechanical and scientific subjects, and notices of new inventions; notices of all the Patents issued at the Patent Office, Washington City, are published in the Journal, together with a large amount of information on Mechanics, Chemistry, and Civil Engineering, derived from the latest and best authorities.

This Journal is published on the first of each month, each number containing at least seventy-two pages, and forms two volumes annually of about 452 pages each, illustrated with engravings on copper and on wood of those subjects which require them.

The subscription price is Five Dollars per annum, payable on the completion of the sixth number; and it will be forwarded free of postage when five dollars are remitted to the Actuary (postage paid) in advance for one year's subscription.

Communications and letters on business must be directed to the Actuary of the Franklin Institute, Philadelphia, Pennsylvania, postage paid.

WM. HAMILTON,

Actuary, F. I.

August 1, 1851.

TO FARMERS, PLANTERS,

MARKET GARDENERS & OTHERS. PREPARED OR ARTIFICIAL GUANO—Manufactured only by KENTISH & CO.
Depot No. 40, Peck Slip, New York.

THIS manure is so combined, that the Ammonia and other fertilizing gases are absorbed, fixed, and are given out to vegetation only as it requires them. No rot, mildew, worm, fly or other insect can approach it; an important consideration to farmers generally, but particularly in potato planting. It will be admirably adapted to the renovation, restoration and fertilizing of such lands as have been worn out.

It may be used broadcast, after the ground is ploughed, and then harrowed in with the seed. It is also valuable as a top dressing. Six acres per day can be thus manured in a day by one man.

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do do Ayrshire do do

do do Devon do do

do do South Down Sheep.

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Sept. 1851.

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Sept-1

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(Sept-4)

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Sept-6

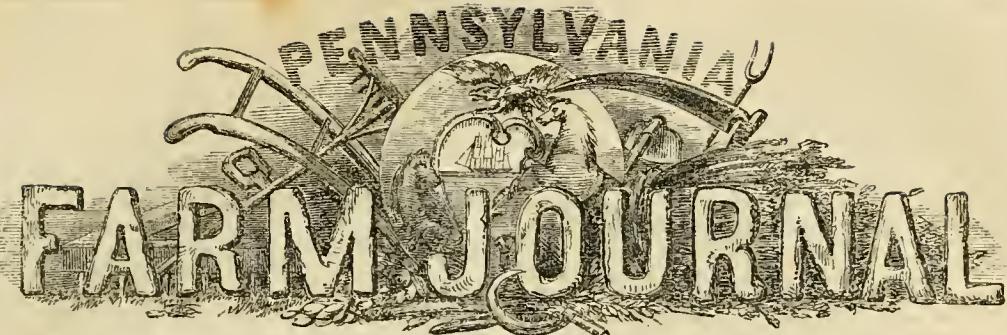
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(Sept-11)



PENNSYLVANIA FARM JOURNAL

VOL. 1.

LANCASTER, PA., DECEMBER, 1851.

NO. 9.

THE FARM JOURNAL.

S. S. HALDEMAN, Editor.

Address delivered before the Pennsylvania State Agricultural Society.

CORRESPONDENCE.

HARRISBURG, Oct. 31, 1851.

TO THE HON. ANDREW STEVENSON:

DEAR SIR:—The edifying and instructive address which you kindly made before our Society, we desire should be widely disseminated amongst the people of Pennsylvania. Will you add to the great favor done us, your permission that it be published

I have the honor to be,

Most respectfully,

Your obedient servant,

FREDERICK WATTS,

President of the Penn'a State Agricultural Society.

HARRISBURG, Oct. 31, 1851.

DEAR SIR:—I have the honor to acknowledge the receipt of your letter of to-day, asking permission to have the address I delivered yesterday before your Society printed for circulation throughout Pennsylvania. I hasten to place a copy of the address in your possession, to be used as you may deem best. I beg you to believe that I feel the honor you do me by this application, and can only express a hope that its circulation in the manner proposed, may contribute to advance the views of the Society and the several interests of agriculture in your noble state.

I have the honor to be,

Very truly, dear sir,

Your obedient servant,

ANDREW STEVENSON.

To FREDERICK WATTS, Esq.,
President of the State Penn'a Agricultural Society.

FIRST ANNUAL ADDRESS.

Mr. President and Gentlemen of the Agricultural Society:

Whilst I am gratefully sensible of the distinguished honor which you have conferred in selecting me as your organ upon this occasion, I have not the vanity to suppose that I am indebted for it, by any means, so much to any personal merits of my own, as to the accidental circumstance of having been placed, a short time ago, at the head of the Agricultural Society of my own State—an appointment certainly of distinction and honor, but one which, on my part, was as unsought and unexpected, as I feel it to have been unmerited. In accepting the invitation, therefore, to deliver the Annual Address of your Society, I beg you to do me the justice to believe, that I was influenced much more by a desire to gratify the wishes of my agricultural friends and visit this portion of your noble State, than from any impression of peculiar fitness to discharge the duty which your

kindness has imposed upon me; and while I am free to admit that this duty is one in harmony with all my feelings and opinions, I must yet say, that I should have been more gratified if it could have fallen upon some other individual more competent and worthy than I am to do justice to the great cause in which we are engaged, and fulfil the just expectations of your Society. But having yielded my assent, and put my hand to the plow, I cannot recede, and I am here to redeem my pledge, in the manner I deem best and most acceptable to you. Allow me, however, in advance to say, that my situation is one of a somewhat novel and embarrassing character. Personally unknown, with a few exceptions, to the vast crowd that surrounds me, might I not say that I stand here to day in the midst of an entire stranger? but I will not, because I ought not to say it—for when was it that a Virginian in Pennsylvania, or a Pennsylvanian in Virginia, was ever regarded as a stranger in a strange land? For more than three quarters of a century the States of Pennsylvania and Virginia, amongst the oldest and most distinguished of "the good old thirteen," have stood by each other, and been united not only in law, but in hearts and affections—united by common benefits, supported by the accomplishment of equal and mutual rights—the only union that can best secure liberty and happiness. In peace as well as in war—in every thing connected with the interests, prosperity and happiness of a common country, Pennsylvania and Virginia have been one and indivisible. And who is there who would wish to see this sacred bond of sympathy and affection broken—dissolved—destroyed? If there be one, let the spirits of the mighty dead, by whose blood and treasure this Union was cemented, rise up and rebuke him! I feel then, Mr. President, that in coming here to mingle in your councils, to interchange opinions and sentiments with your distinguished and enlightened agriculturists—to aid, if I can, in the glorious cause which has brought you together, and to pay the tribute of my affectionate homage, as a Virginian, to old and patriotic Pennsylvania, I am, in truth, no stranger in her land; but I feel that I am entitled to all the kindred rights of brotherhood and hospitality—and liberally they have been showered upon me! Indeed, since I entered the limits of your State, my reception has been one of continued kindness and hospitality, the memory of which I shall carry back with me to my home, and cherish to the latest moment of my life.

A celebrated moralist has said, that the human heart was not large enough to cherish at the same

time, two sentiments of a lively nature! He probably spoke the truth; for, surrounded by scenes for the last three days, which might well have justified various emotions of the most animated and delightful nature, one alone seems to have occupied my mind and heart; namely, that of deep and heartfelt gratitude! And here let me congratulate the Society and every friend of agriculture, upon the character of their great exhibition; and the auspicious circumstances under which it has taken place; and whilst it may be true that you have not for the first time, Mr. President, made a display equal to the many imposing and praiseworthy spectacles of a similar character which for some years past have distinguished many of your sister States of the north and east, and Maryland in the south, (and few, if any, are before her,) you have had enough to afford great encouragement and promise of better things hereafter. Your exhibition, as a first effort, has been remarkable; and does great honor to your Society and the State at large. Indeed, to have witnessed such an assemblage of enlightened and patriotic men, brought together from all parts of your own State, as well as from those adjoining, for purposes so lofty and patriotic; acting spontaneously and harmoniously together, with no collision of antagonist interests, and apart from all political and party considerations, was delightful and refreshing, as well to the feelings as the intellect. Mr. President, in times like these, after such scenes of excitement into which Pennsylvania has lately been thrown, and especially on such occasions as this, it is good to inhale an atmosphere neither agitated by the din of controversy, nor tainted with party polemics—and when, moreover, we consider the objects which brought together such an assembly—the place of meeting, (the metropolis of this old and renowned Commonwealth,) a State not less famed for its love of liberty and order, than for its general intelligence; for its devotion to literature and science, and above all, for that sober, calm, reflecting sense which, without abating the energies of popular feeling, directs it in its legitimate course, by peaceable and patriotic means, to the attainment of safe and legitimate ends; it cannot fail to make a deep and lasting impression upon the hearts of all present, and give token of the successful advancement of the great objects for which your Society has been formed. What American could witness the scenes which have transpired here within the last three days, and not feel deeply impressed and elevated? Whose bosom did not throb with exultation? What Pennsylvanian did not feel proud in being the citizen of such a State? I wish most sincerely, that not only the good people of your own State, Mr. President, but every farmer and planter of America, could have been here, and witnessed your proceedings—hallowed by such large and liberal and patriotic views as those that animated the bosoms of the thousands that were present, and participated in your festivities!

Then would there come from every hill-top and valley of this vast confederacy, a response not unlike the Macedonian cry of old, inspiring the timid with courage, and stirring up the spirits of the boldest friends of agriculture!

It is not my purpose, Mr. President, upon this occasion, to enter at all into the minute details of practical farming, or the manner of cultivating the various and diversified soils of a State like Pennsylvania. This would be a field of endless extent, and as unsuitable to an address of the character I am about to deliver, as to the objects of your society. Into such a field I shall not enter. If, therefore, the value of an Agricultural address is to be tested alone in pro-

portion as it may convey information, applicable to mere details of every day farming, I shall fail in the effort I am about to make on this occasion. Indeed, without personal knowledge or acquaintance with the various soils and lands of a State like yours, or of the prevailing modes of cultivation, of which I am ignorant; how could it be expected, or desired, that I should occupy the attention of such an audience, composed of so many enlightened and practical farmers, by entering into the details and routine of ordinary farming operations? These more properly belong to the various auxiliary societies of your State, to whom they can more safely be confided. My purpose will be one wholly different, and of a more enlarged and general character. I shall, in the first place, make a brief examination of agriculture, in connection with the other great branches of national industry, and maintain its importance and pre-eminence in a national point of view. Secondly—I shall attempt to show that the prosperity and existence of the old Atlantic States, and especially Pennsylvania, Delaware, Maryland and Virginia, must hereafter mainly depend upon restoring and increasing the fertility of their lands, and the amount of their productions; or they must consent to abandon them. And thirdly—That the only means of accomplishing this, will be by a system of improved and scientific cultivation; by placing the agriculture of the country upon its true basis, and raising the agricultural classes to a higher and more elevated standard! If I can succeed in doing this, I shall have obtained all I desired, in this address, and all that the society could reasonably expect.

Of the importance and value of agriculture, few, I presume, are now disposed to doubt, whatever their opinions may be as to their relative merits compared with commerce and manufactures! That, whether we consider agriculture as an art, or in its effects upon the moral, social, or political character of our government and people, in America, at least, it must be regarded as forming the foundation upon which our prosperity and free institutions must ever repose! To maintain this, it may be necessary to contrast agriculture with the other branches of national industry, here and elsewhere, as sources of national wealth and greatness; and follow it up with a summary review of the agricultural condition and capacity of most of the Atlantic States, and the means they possess for high and improved farming. This, however, I am aware, is a subject upon which there may be, and are, various opinions. Political writers, in all ages, have differed more or less with respect to the true sources of the wealth of nations—some ascribing it to agriculture; some to commerce and manufactures; and others to labor and capital employed in all these. But yet all admit, that whilst manufactures improve, commerce gives value, and labor and capital stimulate, it is agriculture alone that originates! Conflicting, however, as these opinions may have been, and still are, with respect to these hypotheses, all political economists concur in opinion that whatever may be the value imparted by the labor and ingenuity of man, the earth is the parent and fountain of them all. That agriculture is the art by which these productions are multiplied, so as to meet the wants of civilized man, and which are common to all—to the agriculturist, to the manufacturer and seaman, as well as to the artist, the statesman, and man of letters—and as all equally derive their origin from the cultivation of the earth, all must be equally dependent upon it for sustenance. Regarding it then as the basis of all other arts, it justly claims pre-eminence over all others; and such is its connection with

all the comforts of the human race, that it may justly be said, in a political point of view, that agriculture is the only firm and stable foundation of national greatness!

But, Mr. President, we all know that nations, as well as individuals, are too often governed by external appearances and first impressions, until philosophy and science, by teaching men to think, enable them to trace effects to their true causes, and assign to them their relative importance; and hence it is, that **COMMERCE**, from the display it makes before the world, has often been considered the first and greatest agent in the production of national wealth; and manufactures next; whilst modest and peaceful agriculture, hidden in the privacy of the country, is neglected or forgotten; or remembered only to be underrated, and, might I not say, too often despised! And what though it does perform its labors in retirement, and out of view of the busy multitude? What though the arts throng the cities and the public haunts of men? What though commerce hoists its gaudy flag, spreads its swelling sails, and traverses the globe? These belong not to the peaceful calling of the husbandman; and for one I rejoice that they do not.— And yet, in saying this, I do not mean to speak disparagingly of commerce! Far, very far from it. I know that civilization and liberty have ever been identified with the history of commerce. It is not only the patron of art and science, but every where the friend of liberty and religious toleration. No man admires more the enterprise and commercial spirit of our country than I do, or can be more willing to do it honor. Its spirit, moreover, is peaceful, and that gives it additional claims to favor. It is true, that when we cast our eyes back a century ago, when agriculture had fallen from its high estate, we find the cultivation of the soil formed the occupation, almost exclusively, of the humbler orders of the people, without knowledge or capital to enable them to improve it. Nor was it until political economy assumed the form of a science, and caused rulers and statesmen to be more sensible of the value and importance of an improved state of agriculture, that it attracted more attention from the better informed and wealthier classes of society, and exciting the energies of the learned and scientific attracted that consideration which its importance so justly merited. This great work first commenced in Europe, and more particularly in England and Scotland, and nothing had such a powerful effect in attracting to it public patronage and support, as practical science and the establishment of Agricultural societies and associations. These were the levers that first put the ball in motion, and placed agriculture, as an art, upon its true and ancient basis.

Then it was that patriotic men of rank, fortune and talents, gave to it their attention and by personal example, drew to themselves the regard and support of that class of people who had the means of conducting improvements upon the most enlarged and liberal scale, and the Board of British Agriculture was established. This was principally brought about by the labors of a few distinguished individuals, at whose head was Sir John Sinclair, an able and enlightened projector, and a friend of Washington.— And then commenced a new era in agriculture, not only in England and Scotland, but throughout a part of Europe. This Board, whilst it served as a centre of information to agriculturists, performed the same office to the British Government, and pointed out the means of prosperity and safety to the nation. And here allow me to say that it was under the combined influence of this Board, and the numerous societies

which were afterwards established throughout England and Scotland, that agriculture became inspired with a new spirit and activity. Men of science, and political philosophers, began to examine and analyze with deeper scrutiny the sources of Britain's power, and then it was ascertained that wide-spread as her commerce, and extended as her manufactures were, it was to her skilful agriculture, more than to both the other great interests, that England was indebted for the support of her colossal system of public credit—a system that enabled her to breast the flood of Europe's rage; and roll back its waves upon the tyrant, who had disturbed the peace, and at one time threatened the liberties of the world!

For this we have, *first* the statistical results of the taxes levied by Great Britain during her war with France; and, *secondly*, the authority of Napoleon himself, and Sir John Sinclair. Upon referring to the statistics of England, we find that the proceeds of the tax alone imposed upon the proprietors and occupiers of land, amounted to six and a half millions of pounds; whilst the whole product from all other classes, (including merchants, manufacturers, office holders and professional men, &c.) was only between three and four millions; less than one half the amount received from the agricultural classes, whilst the number of proprietors and occupiers of land, who came within the operation of the income tax, was three times as large as that of all other classes. And here I will ask you to refer to the errors into which some of the public writers of Europe, and more particularly France, seem to have fallen as to the true sources of G. Britain's wealth. They seem to take it for granted that the principal part of her industry is devoted to the manufacturing of goods for foreign markets. This is not so.

From the late official returns of her Board of Trade, it appears that the total value of exports of principal articles of British and Irish manufactures, for the year 1849, was only fifty-eight millions of pounds, including the value of the raw material, which, in relation to many important articles of British export, was of foreign production. Now, this sum is little less than one eighth of the whole productive wealth of the United Kingdom of Great Britain and Ireland of which three hundred millions according to one of her ablest statists, is annually created from the cultivation of the soil. Here then is the startling fact, that nearly fifteen hundred millions of dollars are wrung from a soil possessing inferior advantages to those of your own State, Mr. President, and especially those of New York and Ohio, and I might add, Virginia. Well then might it be said, that in England's darkest hour, when invasion threatened her coasts and her shock-gathering perils appalled the merchants and fund holders of the kingdom; where, but among the yeomanry of the land were found the stony hearts and strong arms that presented an impassable barrier to her foes?

On this subject, Sir John Sinclair, in one of his addresses to the conveners of Scotland, which I hold in my hand, [as late as 1826] says: "I have long been endeavoring, in concurrence with a number of respectable friends to promote the interests and prosperity of agriculture. But unless some great exertions are made, all our past efforts will have been in vain; I augur, however, better things for the future. It has proved during the late war with France that national prosperity founded on the basis of agriculture, was solid and efficient. The cause of agriculture saved England from the yoke of Napoleon."— And let us hear what he thought of this matter. I have seen it stated in some of the memoirs of his life

that he was in the habit of reading the reports of the British Boards of Agriculture with great attention, and particularly those of Scotland, in relation to which, he is reported on one occasion to have said :

That the Scotch agriculturists had made their country, which was one of the most sterile, one of the most fertile in all Europe, and that they were the right arm of the British government, and but for their exertions he should have been enabled to have overthrown England."

And yet, Great Britain did little or nothing for her agriculture and rural economy until within the last century; and in fact never brought this great branch of national industry and wealth to any perfection until after the establishment of her British Board of Agriculture, and those numerous associations scattered throughout the whole kingdom. And here I cannot do better than to refer to the opinion of Gen. Washington, as to the importance and value of this board and of agricultural education. When the first board of agriculture was established, Sir John Sinclair forwarded to General Washington the proceedings of the board, with a diploma constituting him an honorary member. In a letter of thanks of the 10th July, 1795, he says:—"From the first intimation which you were pleased to give me of this institution, I conceived the most favorable ideas of its utility, and the more I reflected on the plan since, the more convinced I am of its importance in a national point of view, not only to your own country but to all others which are not too much attached to old and bad habits to forsake them, and to new countries which are just beginning to form systems for the improvement of their husbandry."

In another letter he says: "I have read with pleasure and approbation the work you patronise: so much to your own honor and the utility of the public; such a general view of the agriculture of Great Britain cannot fail to be beneficial to the agricultural interests of your country and to those of every other where they are read, and must entitle you to their warmest thanks for having set such a plan on foot. I am much pleased with it myself and pray you to have the goodness to direct your booksellers to continue to forward them to me. I know of no pursuit in which more real and important service can be rendered to any country than by improving its agriculture, its breed of useful animals and other branches of husbandry—nor can I conceive any plan more conducive to this end than the one you have introduced, bringing to view the actual state of those in all parts of the kingdom, by which good and bad habits are exhibited in a manner too plain to be misconceived, for the accounts given to the board of agriculture appear in general to be drawn in a masterly manner, so as to answer the expectations formed in the plan which produced them, affording a fund of information useful in political economy—serviceable in all countries;" and again: "it will be some time I fear, before an Agricultural Society will be established in this country. We must walk as other countries have done, before we run. Smaller societies must prepare the way for greater, but with the lights before us, I hope we shall not be so slow in maturation as other nations have been.—An attempt as you will perceive by the enclosed outline of a plan is making to establish a State Society in Pennsylvania for agricultural improvements. If it succeeds it will be a step in the ladder,—at present it is too much in embryo to decide on the result."

Well, Mr. President, your State has at last succeeded in being able to run, after walking half a century. It was just fifty-seven years since this let-

ter was written, announcing the attempt to form a State Agricultural Society, before it was accomplished.

Rather a longer walk I dare to say, than General Washington had imagined. But it has come at last, and I hope with healing on its wings, to the honor of your State, and her patriotic sons.

Now here is authority, that even the most inveterate of our unscientific friends will be disposed to respect. Allow me in connexion with those letters of General Washington, to express a single thought.

What a singular and remarkable occurrence, that a man in such an exalted situation, (and that man Washington) with all the cares and responsibilities of the chief magistracy of such a nation upon him, should have had the time and inclination to write with his own hand, so many and such long letters, to a total stranger, in a foreign land, upon the value, and importance, and delights of Rural Agriculture.

And then, again, how much more wonderful is it that a man like Napoleon Bonaparte, at the moment he was planning his battles and marshalling his forces to trample down the liberties of the world—indeed, amid the din of battle and the shouts of victorious armies—should have had leisure to be poring over the statistical and agricultural reports of his enemy. What a proud tribute to the agricultural advancement, both of England and America!

And now coming back to the subject of these early efforts to revive agriculture, may it not with truth be said that it was to these associations, and to an increasing taste for scientific farming that the agriculture of all Europe was indebted for its vast improvements and success. One of these associations, I allude to the Royal Agricultural Society of England, formed only ten or twelve years ago, contains now more than ten thousand members, embracing every class, from the throne to the cottage, with ample funds to carry out all its schemes for improvement. And it is these associations and societies that have contributed so largely to make England, so far as agriculture is concerned, the garden of Europe; and I venture to say that there now exists within the British dominions a greater fund of solid ability and scientific information, and a larger variety of active and efficient capital, than in any other country upon earth of the same extent and population.

And to what Mr. President, are we to ascribe all this: not to soil and climate certainly, because there are few countries with a less propitious climate, less genial sun, or natural richness of soil than the English can boast. No! no!—it is to be *found* in that fact that she surpasses all other countries in the universe in the art of cultivating land, in judicious cropping, in her systems of enclosing, draining, mowing, and in the breeding of domestic animals, and especially sheep and cattle. And such are the resources growing out of British industry, that with a population one-third less than that of France, she exceeds her from eight hundred to a thousand millions sterling capital employed in husbandry. Is it not idle then, to suppose that any thing else can mainly have contributed to this, but agricultural knowledge and education, practical science with all its discoveries, and the establishment of societies throughout the whole kingdom, and the efforts made to rouse up the nation to regard agriculture in its proper and true light?

It was because husbandry became the road to wealth, and power, and respectability. Hear what has been recently said on this subject at one of the annual meetings of the Royal Agricultural Society:

"The Society have the satisfaction at the close of

the year, of congratulating its members on the steady advance of the Society in the accomplishment of its prospects and resources, amongst which it cannot fail to allude to the establishment of the numerous local societies for the discussion of agricultural subjects which have mainly originated from the attention which the exertions of this Society have attracted to the improvements of Agriculture, and which have led to such great and beneficial results, and they recommend that a chemical analysis of the plants grown in different localities and soils throughout the Kingdom shall be made at the expenses of the society, and funds were voted for that purpose.

And what, Mr. President, would be the answer of our friends, the "nascientives and good enoughs," to this array of evidence in favor of agricultural education and science. That I suppose which Cincinnatus is reported to have given centuries ago—"We prefer the good old way."

And if such be the relative importance of agriculture in Great Britain, whose commerce and manufactures are so extended, how infinitely more important must it be to the agricultural classes in such a country as ours, whose territory extends now from the Atlantic to the Pacific! Indeed, without running into the errors of the economists or adopting their theories, where on earth can the paramount importance of this pursuit be so safely asserted as in the United States? Here the cultivation of the soil has advantages over every other portion of the globe, because so intimately connected with our national character and our free institutions; acting so powerfully upon the constitutions of our people! And if it be true, as it has been supposed, that in regions like Switzerland and America, whose mountains lift themselves to such vast elevations above the sea, the torch of liberty burns with a purer and brighter lustre, and the hardy spirit of freedom and independence of thought and action, more peculiarly belong, then have we advantages which no other nation on earth can boast. And then if we look to your own State, and more especially to New York and Maryland, and to the whole of New England, we shall the effects of agricultural knowledge and practical science, strongly exemplified, though, as I shall in another part of this attempt to show, that high as their improvements may be, they are far, very far below the standard it ought to have reached, with the means and facilities they have had at their command. What, then, shall the conjectural scruples of the prophetic calculators in our own country avail against this mass of practical evidence which three-fourths of a century have accumulated? Why, if the only effect of these societies and associations was to bring together the cultivators of the soil in the various portions of the Union; awakening their attention to what had been done, and what was doing elsewhere; leading them to an interchange of views and feelings, and animating them to enterprise and emulation, who is there that doubts but that these societies rested upon an unquestionable basis of utility? And why do these individuals who set themselves up against all scientific and book-farming, as they call it, imagine that nothing new is to be learned in the arts of life, and especially in relation to the cultivation of the soil—that agriculture has reached its goal? Do they know that there is no obstacle to the march of mind and improvement, so insurmountable as the conceit that we are either wise or good enough; and that it is this self-gratulation that so long closed the eyes of enquirers and shut out the lights of knowledge as to the cultivation of the earth? Do they know, or have they forgotten that it was many thousand years after

the world began, before it was known how to make a plow? That Cincinnatus (who is held up as their great pattern for husbandry,) and who was satisfied with the "good old way," turned up his land with the limb of a tree for his plow, and a knot to it for a coulter and share; and when the patriarchs were grinding their corn with pestles and stones?—and by the bye, it may be within the recollection of some who are now present, when this species of grinding was resorted to in portions of the western country—possibly in parts of Pennsylvania, which are now filled with steam mills, and machinery of the most costly kind? Why, how long has it been since the use of the potato was found out and used? Need I remind you, Mr. President, or this assembly, that it was the ferocious soldier and bigotted fanatic of Spain who gave to the world this treasure, by transferring the wild potatoes from the waters of La Platte, and the mountains of Chili to Europe; and in doing so saved a large portion of the Old World from the desolations of famine? And how strong is the goodness of God, manifested every way? Yes—these same hands which destroyed human life without measure or mercy, gave to countless millions the means of living; and moreover, by the introduction of the bark of Peru into medicine, removed from the earth a desolating scourge which destroyed more nations than the plagues of Egypt! It has been well said, that this is a period in which the fields of science and useful knowledge are largely and successfully employed in a country where the means of correct information are as free as the air we breathe.—A spirit of enquiry has gone abroad in every department of science, and what may perhaps be justly claimed as distinguishing the present age above former times, is the fact, that the lights of science have been pressed into the aid of all the useful arts, and no longer waste their strength in looking through metaphysical disquisitions, for the discovery of truths that have no practical use. Learning, thank God, is no longer subject to monopoly, but is actively engaged in the service of the arts; and what has hitherto been deemed the province of the schools, is now the property of *all* for the benefit of *all*! And agriculture, that glorious art, which was so long degraded from its rightful place in the scale of human occupation, is now assuming its just rank; and the name of farmer has ceased to carry to the mind the idea of inferiority or dependence. It is no longer a plodding art, but has become a science; in which all the powers of the human mind have been called into action, and the sources of mechanical power put in requisition to aid its progress and improvement.

Chemistry, Botany, Geology, Mineralogy, and the principles of mechanical power, are no longer the source of useless experiment to the philosopher and scholar, but have been pressed into the service of agriculture and manufactures, and every branch of practical science, rendered subservient to satisfy our wants and the gratification of a refined taste. We live indeed in an eventful period! An age of agitation and progress—of bold and lofty intellect! The whole world seems to be undergoing change! Events pregnant with instruction and warning, and of a startling character, succeed each other with a rapidity that excites our special wonder! There has been no period since the commencement of the world, in which so many important discoveries have been made as within the last half century. I will take a few of the most striking instances, for which I am indebted to one of your own distinguished journalists. Fifty years ago, there was not a steamboat in existence, and its application to machinery unknown; the first

steamboat was launched in 1807 or 8—and now how many thousands are traversing the waters of America? In 1808, there was not a single railroad in the world! The fire horse will travel in as many hours now, a distance which some years ago, it took as many days and weeks to accomplish. A few years ago, it took weeks to communicate between the Atlantic cities and New Orleans, which is now accomplished in a few minutes by the electric telegraph.

Electrotyping was but lately discovered, and a press, capable of printing 10,000 copies (I believe it has gone up to 20,000) in an hour.

Gas light was unknown fifty years ago, and now every city and town is lighted with it, and we hear of a still greater discovery, by which light, heat, and motive power can be produced from water, with little cost. Daguerreotype and Phototype and a hundred other types with all their beautiful inventions are the work of the last ten years; and Gun Cotton and Chloroform are of still more recent discovery. And Astronomy, has come in and added a number of new Planets to the Solar System.

And yet, Mr. President, depend upon it, that with all our knowledge and improvements of the age, both scientific and practical, there are even better ways than those now in use, in relation to our field industry, and the operation of mechanics. Who imagines that in this immense repository in which we live, the whole of its contents have been exhausted, or a major part of them? Why the very discoveries in art and science show that even now in this age of fancied maturity, knowledge and science are yet in their infancy. The land that now teems with such splendid designs and enterprises for the benefit of man, has scarcely yet seen the dawn of that improvement in art and science which awaits it. Who will prescribe to knowledge boundaries, or restrain the insatiable curiosity of man? Who attempt to set limits to the march of human improvement?

Has the spirit of Philosophical enterprise yet exhausted its discoveries in common, or atmospheric electricity; in explosive or physical forces—in atmospheric pressure, or electrometers, with all their subtlety and power, their excitability, rapidity, and intensity of action!

Does any one imagine that the secrets of the elements are yet exhausted? That the bowels of the earth may not yet teem with unknown treasures?—That fire and water are not yet to be applied to purposes not less wonderful than that of making the very billows of the ocean conquer themselves?

Is it not wonderful to suppose that plants which are now trodden heedlessly under foot may not become important objects of commerce, and form new sources of national wealth? That undiscovered planets may not now be tracing their silent and eternal course in the heavens, whose rays ere long may burst upon our sight and renew the vigils of the astronomer?

Let the bold and rapid course of knowledge and improvement within the last half century answer these interrogatives.

And now, Mr. President, for the application of what has been said to your own State, which I venture to say would derive greater benefits from the lights of practical science, the establishment of Agricultural Societies, and the diffusion of correct information as to the best mode of cultivating the earth, than any other State in the confederacy, every thing considered. Mark that! For who is there that now expects, with all the energy and industry of man, that the agriculture of any of the old States, and especially Pennsylvania and Virginia, can ever again

reach a high state of improvement, without the aid of agricultural knowledge, and the benefits of modern science, to say nothing of political influence and power? Why sir, as well may we expect to reap without sowing, or the plants that are reared for human sustenance, would yield their fruits without human labor, as that the theory or practice of agriculture can be brought to any perfection, or be made to approximate towards it in any very profitable degree, unless those engaged in it can be induced to act more in a body and more in concert, in regard to their great and best interests. And here suffer me to glance for a moment to the condition of Pennsylvania, and the means she possesses for the highest state of improvement, as well in relation to her agriculture, as to other sources of national wealth; and to see to what extent she is obnoxious to the charge of unscientific and unproductive husbandry. What she has done for agriculture, and what she has failed to do. And with all her improvements, and they certainly have been far superior to most of her sister States, and do her honor, who can look through her wide domain and her vast resources, and not be struck with the fact that her agricultural condition is still far, very far below that point of elevation that she ought to hold in the scale of high farming—and whilst it will be readily admitted that in many parts of the State an improving and flourishing system of cultivation prevails, that has restored in a high degree the productiveness of large portions of her land—yet is it not equally true that these hold but a small proportion of the State? and what is still more surprising is, that where deterioration prevails it is in those parts of the State where the choicest advantages for successful improvement have been most bountifully showered by a beneficent Providence. I shall not particularize lest it might be thought invidious, and comparisons are always odious! But may I not ask, and I do it in a spirit of perfect kindness, whether there is one land holder or farmer in your State, who is not satisfied that by a different and more improved system of cultivation than that which now exists, his land would not only be more productive, and his labors more successful, but that the value of his property would be enhanced in a much higher degree. Nor would it, I hope, be considered any disparagement of the farmers of Pennsylvania, if I were to hazard the conjecture, there is now about nearly every farming establishment throughout the State, even the best and most improved, some defect, some mismanagement, for the want of skill and attention, over which the eye of the owner has wandered a thousand times without discovering, or, if discovered, without either amendment or change—and if we extend the examination to the tillage, draining, enclosures, farm houses, meadows, and various kinds of stocks, I dare vouch enough would be found to occupy the powers, be they what they may, of the most industrious and skilful agriculturists in the State.

Why, sir, have you not amongst you still a goodly number of that class of cultivators who may be denominated the unscientifics, and belonging to Miss Edgeworth's celebrated family of the "good enoughs," who are so infuriated as to sit down with folded arms and contented minds, without ever spending a thought or moving a finger towards the modern improvement of the first and best of human occupations, except, indeed, in what they regard as the "good old way." Indeed, have you not men of intelligence and respectability, engaged in agriculture professionally, who still imagine that agriculture is all sufficient to take care of itself, single handed and without concert or co-operation amongst its followers, and that the sin-

gle and unaided powers of each individual who cultivates the soil can bring to it at least a reasonable state of perfection. And then, again, we have another class of persons, quite numerous, who, I regret to say, unite in this war against agriculture.

Why, Mr. President, every day presents the example of men of the highest mental endowment; men whose talents and knowledge would render them capable of enlightening by their writings, and charming by their eloquence, who not only do nothing in aid of this great constitutional bulwark of defence, but who ridicule and reproach those who are attempting to rouse up the nation and the friends of agriculture, to the dangers that threaten them. And yet, how many of these men do we see devoting every faculty of their minds, and every hour of their lives, to the allurements of what they regard as the dignities and honors of life? sacrificing the good of our country, and their own substantial happiness, in pursuit of shadows, or what may be regarded as worthy enjoyments. And this, I feel no hesitation in saying, is another and not the least of the evils to which improved agriculture is doomed in our country, and where one is sometimes almost disposed to think that if a new commandment had been given by God, to hate the earth, it could not have been better fulfilled than in some of these old States of our Union. And then comes the danger of these obstacles becoming more insuperable as we live on, and our passions take a wider reach. And although we know from experience that the deeper the bed of the torrent the more impossible and difficult to change its current, yet we must not despair or relax our efforts in the good cause; however agriculture may have been sorely punished it is to be hoped that it is not devoted.

My confidence is in the spirit of this *age of movement*, and when we see States and Empires, arts and sciences, customs and manners, and laws and governments feeling and acknowledging this inevitable vicissitude and change, it is to be hoped that agriculture alone is not to remain unchanged or unchangeable.

Nor will the change be confined to Agriculture.—All the Mechanic Arts are asserting their rightful claims under the influence of that public opinion which is destined to govern the whole world—and every profession and calling will soon be doomed to acknowledge the influence of practical science and mechanical power. Mr. President, it has been said that the man who could make two blades of grass grow where only one grew before, was one of the greatest benefactors of his species? And shall not those who can introduce a new plant; or eradicate a destructive weed; who can teach us to improve our domestic animals or guard us against the ravages of destructive insects, who has invented a new plow or instrument of husbandry, or determined even an improved angle to the mould board, be equally regarded as benefactors of their country, and entitled to its gratitude? Why, sir, the memories of such men will be cherished and go down to posterity, when the names of warriors and heroes, and statesmen and politicians, will be buried in eternal oblivion?

In this great battle of public opinion, Agriculture, I trust, will be found in its proper place; floating its flag the highest and its crew the boldest, to grapple with those events which seem to be hurrying us on with an accelerated progress, that no human sagacity can foresee.

And then again I would inquire, has Pennsylvania no forests yet remaining to subdue; no swamps to drain; no tracts of waste and unproductive lands ca-

pable of improvement, and wanting nothing but the plow, the hoe and the hod, to make them productive and fruitful fields.

Has she no lands not under culture, but abandoned as barren and desolate, and rarely now trodden by the foot of man or wild beasts, that might not again be brought into successful cultivation?

Are there no deserted habitations, falling into ruin, no depopulation, no separation from friends and connections, and erratic emigrants in search of new homes, new places for their herds, new fields to skin and exhaust as fast as ruinous cultivation can accomplish the work?

Has she no railroads, turnpikes or bridges to erect for facilitating further the internal and external commerce of such a State?

If, sir, you feel any delicacy upon this subject, let me appeal to every intelligent and candid yeoman of your State to answer these enquiries, and say whether the agricultural condition of Pennsylvania is what it ought to be!

And if it be so, as I fear it may be, do the people of this time-honored Commonwealth require to be convinced that means exist, and in abundance by which these evils may be arrested, their population and power retained, their lands restored, and rendered more productive, and the comforts of life increased; and that these means are within the reach of the great body of the cultivators of her soil?

And here allow me, before I pass from this branch of the subject, to make one or two suggestions upon the subject of Emigration to which I have just alluded, and which ought to be regarded as one of vital importance to the old States, and to none more so than Pennsylvania and Virginia.

Every hour of every day, we witness portions of our population abandoning their homes, and friends, for the terrestrial Paradise of the Emigrant—the far West. This is an evil of a fearful character, and should be arrested, and all must see that this can only be done by restoring the lands of the Atlantic States to a high state of fertility, and by improved and scientific cultivation.

Of the prospects and progress of our western brethren I need say nothing here. Their destiny is fixed, and they are marching on to fulfil it with rapid strides and richly do they deserve success. Indeed, every path of human enterprise and improvement has been explored by these wonderful people, with an energy, foresight and industry worthy of the epoch, and of admiration of the whole world, and no one rejoices at it more than I do. But, Mr. President, we must not consent to sacrifice ourselves, and these mothers of States, to add to the strength and power of this new country, covered with flourishing cities and towns and filled with millions of the most industrious and thriving population.

If we have not the fertility of their lands, their boundless plains, their trackless forests, and their magnificent verdure, have we not our own advantages?

Have we not bold and noble rivers, delightful climates, and the more valuable productions of southern suns? And then are there not other and stronger considerations than those which operate on the emigrant to bind us to our native land? Are there not ties dearer to the heart than even gold or rich lands?

Is it not the land of our birth; the homes of our childhood? The habitations of our fathers for past generations? Are we not in the midst of the monuments and graves of our Revolutionary Sages and Patriots?

Why, Mr. President, is this sacred relic of our past history, [here Mr. Stevenson turned and put his hand

upon the Speaker's chair,] this chair, so long preserved with such jealous vigilance, which was occupied by John Hancock when he signed the Declaration of Independence and removed from the old immortal State House in Philadelphia to this splendid hall, so dear to the hearts of Pennsylvanians, and may I not add of every American? The answer is to be found in that principle of association, which compels us to look with interest upon the relies and memories connected with great events or names of renown, and which having come down to us from our fathers will descend to future generations, increasing in interest as they increase in years! And are these monuments and memorials of past times, which appeal to the best emotions of the human heart to avail nothing? Are these hallowed sympathies of tenderness and veneration for our homes and country to be so easily broken, and when broken, forever? The remedy is in our own hands, and we shall be false to ourselves and our children if we fail to avail ourselves of it—that remedy, I must again repeat, is in restoring our lands to fertility, and in elevating the agricultural classes—in scientific and high farming. And here, Mr. President, let me say that Pennsylvania has other and most important interests, besides her agriculture, to urge her on in the course of improvement and enterprise, and these are to be found in her vast mineral resources, and especially in her mines of coal and iron. Indeed the possession of such immense fields of coal within a reasonable distance of the seaboard, may be regarded as a boon of incalculable value, and the main source to which she must now look to elevate her to superiority as a commercial and manufacturing State.

As late as 1846, one of her representatives in Congress is reported to have said, that only fifty years before, coal was unknown in the country; and that it then gave employment to four millions of days work annually. That it kept in movement a thousand ships of one hundred tons each; and afforded a nursery for the training of six thousand seamen, who earned three millions of dollars yearly! That it gave circulation to a capital of fifty millions of dollars!—Kept in activity fifty thousand souls, who annually consumed upwards of two millions worth of agricultural products, and more than three and a half millions of dollars worth of merchandise! What has been the increase since '46, we can now only conjecture! What a field is opened here, Mr. President, for enterprise, in such a State as Pennsylvania, in all the branches of national industry and wealth!—Why these *black diamonds* of her's alone, will prove of far more value than all the gold of California, or the mines of Mexico. Is it not calculated to baffle all speculation as to the point it is yet to elevate her! And yet, would it not be passing strange that at such a time at this, when skill, and zeal and industry are pushing on all the other arts of civilized life to their utmost perfection, that art which fills the purse and sustains the sword of the nations; the art by which under God we live and move and have our being, should be the only neglected and despised in a country like ours? Most sincerely do I wish that I had the power of that victorious language, which could carry deep and solid conviction upon this subject to the minds and hearts of every cultivator of the soil, not only in your noble and patriotic State, but into every hole and corner of this vast confederacy!

Having in the earlier part of this address, referred to the state of English and Scotch agriculture, and given estimates to show their increased productivity from improved and scientific cultivation alone;

let me now, Mr. President, add one or two examples from some of the smaller States of the Old World, as to the wonderful results that have been wrought by improving and fertilizing poor soils, and I select from States whose agriculture has probably not received the attention and consideration it merits. I allude to Ireland and Belgium! And first as to Ireland! She, with a territory not more than half as large as that of Pennsylvania or Virginia, certainly not of New York, supports not only a population of more than nine millions, but exports more than fifty millions worth of products! And when we pass over to Belgium, a comparatively small principality, we find her sustaining an agricultural population of more than three hundred and thirty to the square mile.—Now Pennsylvania and Virginia, with a population equally dense, could each sustain a population of more than twenty millions, just by the same system of farming and improved cultivation!

M'Culloch, in his great statistical work, in alluding to the agriculture of Belgium, remarks: "That her soil, artificially enriched, produces more than double the quantity of wheat required for the consumption of its inhabitants, amounting annually to more than sixteen millions of bushels."

Now these statements, striking and marvellous as they appear, are no doubt true, and then the inquiry follows:—How is it all produced? The answer is, by improved and scientific cultivation, but especially in the making and keeping of manures, and in the wise and judicious application of them! Well may these be regarded as startling results and calculated to carry conviction and confidence to every candid and unprejudiced mind. And if such are the results and rewards of highly improved modern husbandry in the Old World, let us see what are the losses sustained in this new one of ours, from a totally different system of farming and cultivating our lands, and no where will the contrast be more applicable, than to our own States of Pennsylvania and Virginia, and a few others which I need not name. In doing this, however, I shall need official and statistical data, and in the absence of legal provisions in Pennsylvania for procuring such statistical information, I must resort to some other States that can furnish it. For this purpose I shall select New York as an example, to show the probable and estimated loss that is annually sustained from the impoverishment of soils and the want of more improved cultivation. And her case will be entirely applicable as well to Pennsylvania as to most of the other old States. The census of 1840 will be the basis of the calculation I am about to submit, and for it I am indebted to one of the official reports of the Patent Office, a publication, by the by, of great value, and containing a fund of the most interesting information upon all branches of national industry.

Now, according to this statement, it appears that New York has TWELVE MILLIONS of acres of IMPROVED LAND, cultivated by five hundred thousand laborers, being an average of 24 or 25 acres to each laborer.—Of these twelve millions ONE MILLION is so calculated as to become richer each succeeding year. It is in the hands of some forty thousand skilful farmers, who take and read agricultural journals and papers, and not only sustain, not only a great State Society, but the numerous auxiliary societies scattered through that great Commonwealth—Empire, rather, let me call it!

Three millions more of the twelve are so managed as barely to hold their own in point of fertility!—They belong to a class of farmers who, we are told, do as well as they can from personal observation, and

seeing how the reading and more skilful cultivators of the one million class improve their estates and domestic animals.

The remaining eight millions of acres of the twelve, are in the hands of about three hundred thousand persons, who still adhere to the "good old way" of their fathers, in farming or rather in sinking the land and extracting from the virgin soil all it will yield, and returning to it little or nothing in aid of the productive powers of the land.

Now what proportion and in what degree of these three classes Pennsylvania and Virginia can claim, neither you, sir, nor I, will venture an opinion, but if it was put to a jury of enlightened and good farmers to decide, I fear there would be a great predomiance found in favor of the third class, whom I need not say, belong to the "unscientifical," and that aforesaid family the "good enoughs."

And, in what ratio, Mr. President, do you suppose these farms in New York have deteriorated in half a century? Why the fact is hardly to be credited, that less than seventy years ago they yielded in wheat from twenty to thirty bushels, and now only from five to eight!

From a treatise on "American Husbandry," published at the close of the revolution, the following statement is made:—"That many parts of New York yield a larger produce in wheat than is common to England. Upon good lands about Albany where the climate is the coldest in the country, they sow two bushels and better to an acre, and reap twenty to forty; the latter quantity is not often had, but twenty to thirty are common, and that with such bad industry as would not yield the like in England, and much less in Scotland. This is owing to the richness and fertility of the lands."

And now let us see what is the present yield of the same lands, according to the State census of New York, of 1845. From this it appears that the county of Albany produces $7\frac{1}{2}$ bushels to the acre, although the farms are on tide-water and near the capitol of the State, with a good home market and every facility for producing the most valuable fertilizers.—Duchess county, also on the Hudson, yields an average of only 5 bushels; Columbia, 6 bushels; Rensselaer, 8; and West Chester, 7.

To renovate these eight millions of acres would cost a hundred millions of dollars, and the aggregate loss to New York and the world is estimated at upwards of seven millions of dollars annually!

And this state of things, *ceteris paribus*, is as applicable to Pennsylvania and Virginia, and the South, as to New York.

And then comes the question, what escape is there from all this, but to improve and enrich the lands by high cultivation, or abandon them and emigrate? To educate and elevate the agricultural classes!

And yet New York, with all her wealth and enterprise, and all her efforts to render her agriculture profitable, has done nothing towards a system of *general Agricultural education*!

With her numerous societies and associations, she is yet without an *Agricultural School* on a scale worthy of her wealth and enterprise. Nor is there one, it is believed, in the United States!

How long will it be before this reproach will be wiped out, it must be for New York or Pennsylvania to answer!

We, of the Old Dominion, Mr. President, can no longer, I fear, hope to lead, but must be content to learn, and follow, at least, a while longer. I rejoice, however, in believing that she too is fast yielding to

that spirit of progress and improvement that marks the age!

We see this exemplified in her improving agriculture; in the increasing number of her railroads, canals, turnpikes and bridges, and the increasing facilities for internal and external communication. The value of her lands, according to the report of her chief magistrate, has increased nearly 30 per cent. in her entire landed property, and many portions of the State, which 20 years ago were barely inhabited, are now filling up with an industrious population, and well cultivated. The Fire Horse is busily at work in Virginia, traversing every part of her dominion and his whistle, it is to be hoped, will not only rouse up the "Deer and Eagle of her Mountains," but her hardy and gallant sons from that lethargy and "glorious inactivity" which has so long kept this old commonwealth in the back ground of improvement, and paralized those energies and resources which were more than sufficient long since to have placed her in the front rank of national improvement and greatness! But her destiny is onward, and God speed her success.

And then again we have another stumbling block to all agricultural improvement, which is probably to be met with in Pennsylvania, to an extent quite as great as in some others of her older sisters, and that is in deep rooted attachment to the old modes of cultivation, and in old habits and prejudices descending from father to son, always the most powerful enemy of all new systems of improvements, and in a great measure, I regret to say, confined to cultivators of the soil. I need not tell you, Mr. President, nor enlighten this enlightened audience, how slowly and reluctantly they are yielded by even the most intelligent and candid. Hence it is that from generation to generation men pass in the track of their predecessors, and to conquer this propensity, and the evils which flow from it, is the effort of and one of the best results of modern science connected with agricultural improvement. In vain may the tongue or press be employed to satisfy the practical and unscientific farmer of errors and habits which a life of labor and toil may have confirmed! He is either deaf or blind to such appeals? He laughs at all book learning, and sticks to the good old ways which have come down from some of his great grand-fathers!—There is but one remedy, and that is to make the experiment, explain the method, and exhibit the successful result, and then he may yield and follow in the foot steps of successful experiment. But even then, as I have before said, most reluctantly. [Mr. Stevenson related one or two very striking and amusing anecdotes both in relation to England and America, to show the force and folly of this inveteracy of habit among farmers, and the prejudices which sometimes exist between the two countries as to their modes of farming, living, &c.]

Nor is this all that the agriculturists have to bear, as a class they are often not only underrated, but supposed not to stand upon the same platform in public estimation, with the learned and liberal professions.

Now, Mr. President, this is a matter which I regard as vastly more important than is generally supposed, and another of the evils to an improved state of agriculture. Will you pardon me for a moment while I say a few words upon the agricultural classes in a country like this, and the nature of their calling. And if it be true, that labor, occupation, difficulties to absolute, obstructions to overcome, and the balancing between hopes and fears, constitute the true elements of man's nature, where so much, as in the cultivation of the earth, is to be found the foodful

nurse of earthly happiness? Where can man indulge his love for nature, or render greater benefits to his fellow men, undisturbed by envy or prejudice, or the vanities of the world, than in the retirement of the country, and seeking the bread of industry by the sweat of his brow in cultivating the soil?

And is it true that agriculture has fallen from its high estate, to one of a low and grovelling character? Never had it a right to stand higher, even in the palmiest days of Roman greatness! And do they, Mr. President, who now attempt to disparage it, remember what it then was? If they look into the civil institutions of Rome, when she was mistress of the world, they will see how deeply it entered into her policy, not only to promote, but to dignify agriculture and its professors. Why, Pliny tells us, "that then the earth took pleasure in being cultivated by the hands of men crowned with laurels and decorated with the highest honors." And Cicero declares "that nothing in the world was more useful, more agreeable, or more worthy of freemen, than agriculture," and in saying so, he pronounced not his own opinion only, but the public judgment of his age and country. If troops were to be raised for the defence of the Republic, where, but in the *tritibus rusticis*, were the nurseries of the Legions? Did the emergencies of the state require a General or Dictator? where was he sought—in the schools or in the forum? No, sir. No, he was taken from the plough. Were their services to be rewarded, and if so, with gold, or medals, or high office? Not at all. It was done by donations of land; and the quantity just so much as a man could plow himself in one day. A compensation, which by the bye, I fear, in our days of prosperity and greatness, Mr. President, would not be esteemed, by our warriors, a very liberal compensation.

Agriculture a degraded occupation? Why I blush whilst I repeat it! What is there, let me ask, in human duties, what in science or in arts, what in morals, philosophy or religion, that may not to be found amongst the cultivators of the soil in as great a degree as in any other calling on earth? What occupation more full of dignity; duties more full of joy, than those of the husbandman, in all that invests man with simplicity, practical sense and enlightened benevolence, and with all that is lovely, valuable or disinterested in woman? When was it that man ever rose from a state of servitude and dependence to ownership of land, that he did not learn self-respect and become more elevated in his own esteem. This it is that breathing no low or abject spirit, he reaps from the soil the harvest of virtue; the sobriety of the father, the economy of the mother, the devoted labor of the son, the chastity of the daughter. These, those, Mr. President, are the fruits of glorious agriculture, and this is the answer to all who deey it! To the little minds in other countries who regard the pursuits of the husbandman as ignoble, (and there are such,) we have abundant vengeance for our contempt, when we recollect the homage paid to it in every stage of the world by the colossal abilities of their day!—When it is assailed in America we have but one answer to give, and that is, that the plow can never be regarded as an ignoble instrument—which was guided by Washington! The one—the first—the last—the best! And now I come lastly, to the enquiry, shall this state of things which now exists be suffered longer to do so? Shall the spirit of improvement that has totally changed the agriculture and the condition of the greatest portion of the old world, and so much of the new, be banished from the good old states of the Union? If not, what is the remedy to be applied?

I answer fearlessly—an improved and enlightened system of cultivation, agricultural education and legislative aid! These are necessary and must be had. Soils must be analysed; and for this agricultural chemists are needed. Agricultural implements must be improved; and for these agricultural societies liberally endowed will be able to furnish models of improvements and machinery. The plow must be driven deeper into the soil. Lime and plaster and fertilising manure must be made to stimulate the sleeping energies of soils newly turned up to the fertilising dews of heaven! Clover and other improving crops must restore to exhausted soils the vegetable matter so indispensable to fertility! Farmers must be invoked to push their enquiries to the extent of their capacity, and their experiments as prudent economy will permit it, and to make no other use of the good old way than to adhere to it until a better is pointed out! Every State should have a State Society, such as yours, with ample means of carrying out its meritorious objects! This must be the foundation stone of all agricultural improvements upon a large and liberal scale! Nothing can be done without it!

And here I will say that one great advantage, if none other, which would grow out of the meetings of such associations properly organized, and endorsed by the state, would be bringing together in one great social body, most of the leading and efficient friends of agriculture from all parts of the State at some central point. Their views would be similar, their objects would accord, and their meeting would be friendly and social. They would come together as you have done, animated by a kindred spirit, and devoted to kindred pursuits, act in concert and part with the kindest feelings.

Could anything but unmixed good come out of such associations? Political and party spirit would be banished, and no interest would claim attention but such as gentlemen and Christians would conscientiously support. Such meetings would serve to bind together the people in the different portions of such States as Pennsylvania and Virginia, and would be useful if they did not even give such an impulse to agriculture as I have attempted to prove and most strongly believe.

What scene more dignified and delightful than to see, as we have done here, hundreds and thousands of happy, intelligent and independent farmers, collected from all parts of your State, not to engage in political and party strife, but meet together for their country's good, consulting how best to promote the great interests of agriculture, with no jarring elements, no heart-burnings of any sort, but peace and good will, and benevolence animating every bosom!

And then the various county and auxiliary societies would send their delegates, and combine in one body upon every anniversary of the State Society, an immense mass of intelligence collected from all parts of each State, bringing into social and profitable intercourse those who would otherwise remain strangers to each other, and would thus collect a mass of information not only upon farming, but other great interests of the State.

And as the occupation of the plough is of no party, as the times are those of temperance (and I omitted to put this along with the other improvements of the age), as farmers are characterized by the love of order, and their calling the foundation upon which rests the welfare and happiness of all, there can be no danger of any sort apprehended from these gatherings, but they will come and pass off as the jubilees of farmers always do, in the greatest order and

decorum, and in a friendly and benevolent spirit.—Would not such scenes be well calculated, Mr. President, to gladden the heart of every wise and good man? If there be one who doubts it, I only wish he could have been present at the exhibition in Baltimore, during last week, or been for the last three days here.

Nor will the benefits of agriculture be the only of feet of all I have been endeavoring to impress upon our agricultural friends. When regarded in a political point of view and the prosperity and permanency of our free institutions, what strong inducements we have, not only to uphold, and maintain the rights and power of these glorious old states to whom we are indebted not only for the blessings of our liberty, constitution and Union, but to whom we are too look in the hour of peril, for their preservation and perpetuity. For let no man deceive himself in the belief that they can ever be preserved in any other manner than in that spirit of compromise and mutual affection in which they were founded by our fathers. To the federal government must be yielded the exclusive and energetic exercise of all external and national powers secured to it by the constitution. To the state governments must be secured the mass of powers which relate to the external and domestic affairs of the confederacy.

The rights secured to the states and the people must be preserved inviolable upon the basis of the constitution, then will our glorious Union in the language of the Father of his country, "become the main pillar in the edifice of our real independence; of tranquility at home and peace abroad; of our safety, and prosperity, and of that liberty which we prize so much." Then, and then only, Mr. President, will our Union become immortal.

These are some of the views which I have felt it my duty to present on this occasion, and which I only regret are not more worthy of the cause, and the consideration and favor with which they have been received by you and the distinguished assembly. One more word, and I shall have done. If, Mr. President, we are to succeed in the scheme in which we are engaged, of restoring and improving the lands and agriculture of our respective states, we must be not only zealous and untiring, but united as a class. We must trust in the integrity of our cause, and in the intelligence and enterprise of our people!

And if it be true that the price of liberty is eternal vigilance, not less so is it as to successful agriculture. You, sir, and those who are in high places, must become the warners upon the wall to rouse up and warn farmers of the true state and condition of things, and of the dangers that beset them, and point out the means of escape from the breakers upon which our agricultural ship has been of late years too rapidly driving; and then if they heed not the warning, but are determined to perish, their blood will not be required of the watchmen! For one, however, I have no fears of the result, if we are true to ourselves. And why shall we not succeed? Why sit down in despair? Our cause is not the cause of the great and wealthy of any particular system of politics, or any party, but the cause of the country! Let us then persevere, and should we triumph, as I feel confident we shall, then will a new era open upon these old, and venerated, and beloved commonwealths, which, in spite of every difficulty, will carry them through a long course of liberty and honor to the farthest goals of wealth, prosperity and happiness.

Communications.

TRANSLATED FOR THE FARM JOURNAL.

Agricultural Chemistry, No. 1.

We come now to consider the compound substances.

Atmospheric air is formed by a mixture of one-fifth oxygen with four-fifths nitrogen. As no living creature can exist without atmospheric air, so it is indispensable to the growth of plants, and they are furnished with peculiar vessels for absorbing it. But the soil likewise requires atmospheric air; and hence the great benefits which result from loosening and stirring the ground; as well as the injury sustained when the land becomes bound and compact, or is covered with a crust, so as to be nearly impervious to the air. Atmospheric air is not merely the medium or vehicle by which oxygen is conveyed or supplied to plants, but it contains also other aërial substances, though in minute proportions, which are absorbed in part by the soil and in part by the growing crop or natural vegetation. Impalpable particles of substances not really volatile are also contained in it, which serve as nutriment for plants. Thus during a protracted drought a large quantity of substances not properly belonging to the atmosphere is taken up and becomes mixed with it, and are then again precipitated by rain. The consequence is a more striking and more rapid growth of vegetation, than is observed when rains are frequent and of long continuance, and the atmosphere is not allowed time to become stored with such fertilizing particles.

A further valuable property of atmospheric air, is its capacity to receive and retain the vapor of water, as it rises from the earth. The warmer the air is, the greater is the quantity of water it will take up; but when its temperature is reduced, as during cold nights, it parts again with a portion of the moisture it contains, which is then precipitated in the form of *dew*. The fertilizing effects of dew flow not alone from the moisture it supplies, but also from the gaseous and other minutely divided substances deposited with it. Hence the benefits which result from stirring the soil during the prevalence of drought, as will be hereafter noticed.

Oxygen and nitrogen serve to form other combinations also, among which *nitric acid* is of importance to the farmer. In its pure state this acid acts corrosively on vegetation; but when converted into a salt by means of an oxyd, it acts as a fertilizer in consequence of the nitrogen it contains. Hydrogen in combination with nitrogen forms *water*, without which no living body can grow or thrive. Water operates in a two-fold manner, mechanically and chemically. Its mechanical operation consists in conditioning and promoting action and reaction among bodies. In a dry state different substances may lie side by side for years without perceptibly affecting one another. But no sooner do they become moistened by water than a reciprocal action commences between them. If the

soil become thoroughly dry, the action of the air on it ceases in a great degree or becomes suspended, because the oxygen itself of the atmosphere requires a certain degree of humidity to enable it to combine with other substances. Water, moreover, serves as a vehicle for many substances, which are found only in combination with a certain portion of moisture, or in a liquid state. This combination is meant when we say that water dissolves such substances, or holds them in solution; and in such a state of solution almost all substances must be, if they are to serve as food for plants. On the other hand, there are many substances which are insoluble in water. If these consist of or contain ingredients which, under different circumstances, would serve as food for plants, they must still be regarded as though not present and of no effect or value, so long as they are not rendered soluble. Happily however, there are many substances which can be used to render soluble those which are not directly soluble in water. For example, iron, exposed to dampness or moisture, combines with oxygen, forming protoxyl of iron. This, combined with carbonic acid becomes soluble; and when in excess, proves injurious to plants. As water has the property of taking up or dissolving other substances, it never occurs pure in nature, but always contains more or less foreign matter. Even rain water is never entirely pure. The foreign matter contained in water, is almost always fertilizing.

The chemical operation of water consists rather in this, that, by the influence of other substances, it becomes decomposed into its elements, oxygen and hydrogen; and in this way large quantities of water are used or appropriated in the growth of plants.—Water appears under different forms, according to the degree of heat it contains. At low temperatures it appears *solid*, as ice, at ordinary temperatures as a *liquid*, and at very high temperatures as *vapor*. Of the latter the atmosphere can receive and absorb a very large quantity, which it does not again yield up or part from, until it is reduced to a lower temperature. If this occur in the higher regions of the air, *clouds* are formed; and, by further atmospheric changes, these become condensed and are precipitated, in whole or in part, as *rain*. But the atmosphere also, when reduced to a lower temperature, though no clouds be formed, parts with a portion of its moisture in the form of *dew*.

Next to air and water, the most important and most widely diffused compound substance is *carbonic acid*, which is a combination of oxygen and carbon. Carbonic acid is produced by the combustion of carbonaceous matters in atmospheric air; also during the processes of petrefaction and fermentation. It is likewise a product of the act of breathing. It is commonly procured from limestone or marble, pieces of which are placed in a suitable apparatus (fig. 12), and muriatic acid diluted with water being then

soured on them, the rapidly developed gas is received, in a vessel, under water in the pneumatic trough.—

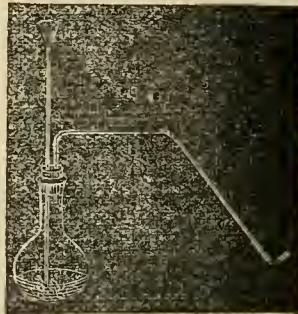


Fig. 12.

But if the gas be required dry, it is to be passed over dry chloride of calcium in a horizontal tube, whereby every trace of moisture is removed from it. Carbonic acid is about one and a half times as heavy as common air. At the common temperature it is a colorless, transparent gas. It combines readily with water, and is attracted and absorbed by it, and hence moist earth takes it up freely. It is wholly unfitted for respiration, and does not support combustion.—As large quantities of carbonic acid are developed by decaying vegetables, much of which is taken up and retained by water, it is probable that it is thus introduced into plants by the absorption of such water, and is then decomposed to appropriate the carbon.—But plants also absorb it from the atmosphere; and this appears to be the principal mode by which they supply themselves with carbon. Another property of carbonic acid, is, that it can be taken up in excess by many substances, as by water for example. Many substances which are insoluble in water containing only a small portion of carbonic acid, become readily soluble when a larger proportion is introduced.—This is the reason why water containing it in excess will decompose substances on which it would otherwise have little or no effect. Carbonic acid is evolved in large quantities, from natural sources, in volcanic districts. It is frequently contained in wells and caverns, and is produced abundantly by the explosions which occasionally occur in coal mines. It is always present in the air, being given off by the respiration of animals, and by uniting with alkaline bases, it forms an important class of salts, the *carbonates*; all of which are decomposable by muriatic acid, evolving carbonic acid gas in the process.

Another very important compound substance is, *sulphuric acid*—a combination of oxygen and sulphur. For the production of this article, the sulphureous acid resulting from the combustion of sulphur, and which is its lowest compound with oxygen, is conducted (fig. 13.) into a chamber A lined throughout with sheet lead, and thence into chamber B, containing broad shallow vessels filled with concentrated nitric acid. The actual formation of the sulphuric acid takes place in chamber C, the floor of which is cov-

ered with diluted sulphurous acid to prevent the nitric acid from acting on the sheet lead. After pass-

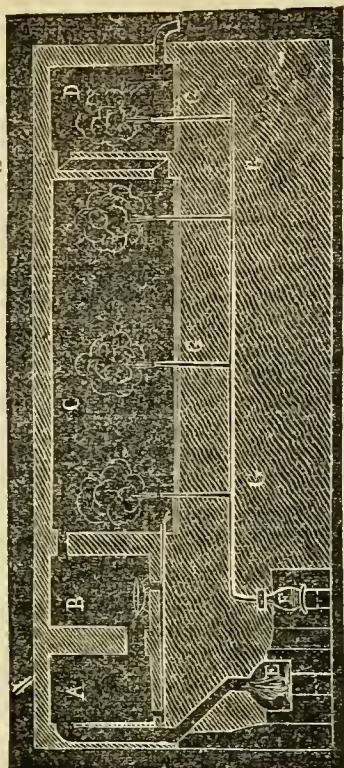


Fig. 13.

ing through the chambers A, B, C, and D, the sulphuric acid formed, collects in the large cistern or reservoir E. A free current of air must be provided for, so that there may never be a deficiency of that essential requisite, atmospheric air. The necessary supply of water is obtained from the steam evolved in the boiler F, and is conducted into the lead chambers by the tubes G, G. The sulphuric acid thus obtained is freed from water by evaporation by leaden vessels, till it attains a specific gravity of 4,848. It is one of the most important compounds known; and very extensive use is made of it in the arts, for the manufacture of nitric and muriatic acid, sulphate of copper, and alum, as also in dyeing establishments.

Sulphur is an essential constituent of many plants, though in its pure state it is wholly insoluble in water; but in combination with oxygen, or in the form of sulphuric acid which unites with oxygen to form a salt, it becomes more readily accessible to plants.—Sulphuric acid is also decomposed by certain substances, and the liberated sulphur then unites with certain other substances, as hydrogen for example, and is absorbed by them. As sulphuric acid is of a very corrosive nature, it can be applied only in a very diluted state. It renders excellent service if, occasionally, forced, in small quantity, into the tank con-

taining urine or liquid manure, and the liquid thus acidulated be used for wetting manure heaps or compost. During the fermentation of animal manures, certain valuable fertilizing substances or elements are liberated, escape into the air, and are lost. But by the use of sulphuric acid their escape is prevented, the sulphuric acid combining with them and forming non-volatile salts—thus retaining and rendering them available as fertilizers, as they subsequently become decomposed again, and furnish nutriment for growing plants or crops.

Phosphoric acid, a combination of oxygen and phosphorus, is likewise a substance of great importance to the farmer. This acid greatly promotes the growth of plants, even when watered with only a weak solution of it in water. Such manuring, however, would be very expensive. But the farmer introduces phosphoric acid into the soil, generally without being aware of the fact, since almost every description of manure embraces more or less substances containing combinations of phosphoric acid; besides which, such combinations, in greater or smaller quantity, are found in almost every soil.

The phosphoric acid taken up by plants contributes mainly to the formation of the grain or seed, especially of the cereals. When this substance has been exhausted from the soil, by several successive crops of grain, it can be supplied again by means of bonedust, which, before its application to the soil, should be well moistened with dilute sulphuric acid, and permitted to remain sometime in the heap.—Bones consist chiefly of phosphate of lime; but the greater affinity of the sulphuric acid for the lime, causes these to combine—leaving the phosphoric acid in an insoluble state. Whilst phosphoric acid generally exists in a nearly insoluble condition, we also find it regularly undergoing mutation and circulation. Thus it is absorbed from decaying organic matter by living plants; and these, in turn, or their products, are consumed by men and animals. The phosphoric acid they contain is thus reaccumulated, and what is not appropriated for the production of bone and flesh, is at once returned to the soil in the form of excrement.

Silicic acid—a substance of great importance in agriculture—is a combination of oxygenated silicon. Silicic acid is commonly termed silicious earth, which is a principal constituent of soils, but predominates too much in those which are termed sandy. It is also found intimately combined with other earths, and then forms calcareous, aluminous and other soils, in which silicious earth, though not preponderating, still acts a principal part.

Silicious earth possesses the following important properties. *First*, it absorbs very little water and readily parts with it again—hence sandy soils speedily become dry. *Secondly*, it appears to be insoluble in water; though this is true only to a certain extent.

In peculiar circumstances, it is decomposed and taken up as food by plants, which require large quantities of it for the formation of their solid parts—as, for instance, the stalks, grasses, reeds, &c.

Silicious earth is seldom found pure in sand, but generally in combination with other substances, as potash, soda, lime, iron, &c., forming *silicates* with them. But carbonic acid has a much greater affinity for these substances than they have for silicious acid; and one consequence thereof is, that, when in combination with water it comes in contact with them, the union between them and the silicious acid is dissolved and the formation of *carbonates* is the result—the silicious acid meanwhile remaining uncombined, is taken up in its soluble state by the water and thus made available as food for plants.

Oxygen in combination with potassium forms an oxyd which is called *potash*. When pure or uncombined with an acid, it is caustic and corrosive; but it never occurs in soils in this condition, for the potash unites with carbonic acid and forms a salt—the carbonate of potash—which is a very soluble substance and a principal constituent of most plants.—Potash is also found in combination with sulphuric acid, and then possesses great fertilizing properties. With nitric acid it forms *salt-petre*; and as a silicate of potash it constitutes a salt, which is not readily soluble, but may be decomposed by carbonic acid.

As potash is a principal ingredient of many plants, the farmer should be careful that it occurs in a soluble condition in those of his fields in which crops requiring large supplies of this substance are intended to be grown. This may be effected in various ways. If the soil contain much clay, it also contains potash, and it is only necessary to render the latter soluble, which is accomplished by the frequent use of the plow, thereby loosening the soil and enabling it to absorb greater quantities of carbonic acid. It thus becomes disintegrated, and the potash is rendered soluble. Again, the potash may be incorporated with the manure, and thus be caused to pass through a process of circulation similar to that of the phosphoric acid. Straw also contains much potash, which is returned to the soil in the manure. The soil may also be supplied with potash by means of unleached ashes, and by the cultivation of tap-rooted plants, to be plowed in, in a green state—because the salts of potash, being highly soluble, are readily carried into the subsoil by rain water, and may be advantageously restored to the surface by means of tap-rooted plants, grown and plowed in green.

CHLORIDE OF SODIUM.—Common Salt. The experience of almost every farmer will now confirm the benefit derived from the mixture of salt with the food of cattle. It appears to be the natural and universal stimulus to the digestive organs of animated beings. In this place, however, its medicinal power alone is the subject of consideration. It is a purgative second to the epsom salts.

**The necessity of increasing the fertility of our soil
—Deep plowing—Economizing manures.**

MR. EDITOR:—In the able address delivered at the State Agricultural Exhibition, we have a striking picture of the ruinous effects of exhausting tillage, as exemplified in some of the finest portions of our country. Nothing can present a louder call on the attention of the patriot, or appeal more directly to the pride and interest of the agriculturist. A general survey of our oldest States in regard to their present productiveness would doubtless result in the conclusion that wherever the land has been under cultivation for half a century or more, its fertility is much diminished. Who has not seen fields which will hardly yield ten bushels of wheat to the acre, but which when newly cleared, produced forty bushels? The fact is, that from the first settlement of the country, the spendthrift process of cultivation, which takes all from the soil and returns nothing, has been adopted; and the quality of the land under tillage in the Atlantic States has consequently been impaired to an extent, which it is painful to think of. In many parts of the country the price of lands has been greatly depressed by this cause, whilst in others, the same result has only been prevented by improvements, public or private, which have communicated an extraneous value.

Whether under any circumstances, it is right to take successive crops from the soil without restoring any thing to it, may be left to the casuists to consider; but stern necessity will teach the Pennsylvanian, that such a course of tillage can no longer be pursued. The numerous canals and railroads have opened the fertile regions of the great West to our Atlantic markets, and at the same time have opened to us such a prospect of competition, as makes it evident that nothing but the most skilful cultivation, will enable us to profit by our position. We have the advantage of proximity to the market and a small freight; but this is counteracted by the higher price of our land and its inferior fertility. Our next western neighbor and young sister, Ohio, produces several millions of bushels more wheat than we do every year, and twice the quantity of Indian corn. Indiana, Michigan and Illinois, and Kentucky and Tennessee, are immense producers of breadstuffs; and they all can, and all do forward their produce to the seaboard, east or south. The effect, is to reduce the prices. Now—our farmers, if they can succeed in doubling their crops, may do as well, or better than they have heretofore done by raising half the quantity and selling it for double the price. It is believed, that they may accomplish this result, by an improved system of culture.

It is fortunate, that the effect of the cultivation, upon which we have animadverted, though pernicious, was superficial. The injury done, is, in general, by impoverishing the soil to the depth of six or eight inches: below which, in most cases, the earth wil-

be found to contain many of the constituents of fertility that having been consumed by the exhausting tillage of the surface, no longer, of course, exist there. Here, then, is a great resource. In many instances, deep plowing and the subsoil plow especially, will enable the farmer almost to realize at once, the original fertility of his land. Reason will show, that the fertilizing materials applied to the surface will sink into the ground by the natural process of infiltration occasioned by the melting of snows and the absorption of rains and dews. Rains have been known to penetrate the earth for several hundred feet below the surface, and the great variety of particles which administer to the growth of plants and which are applied to the surface will be carried to various depths. It is known that the earth is replete with the seeds of an infinite variety of plants, some of which have sprung up spontaneously out of the ground raised from great depths and exposed to the air and sun. More frequently still, it has been observed that the ground raised from the bottom of canals several feet, and other excavations and spread out, has proved to be more fertile and productive than the adjoining soil, which had been cultivated for many years. No one can suppose that all the mineral, vegetable, and animal matter, which has been deposited in whatever way upon the earth, has remained within six inches of the surface. The very tendency of vegetation to push its roots downwards in search of food instructs us better. Deep plowing, therefore, is suggested by the simple information of common sense.

But that alone is not sufficient. Nothing can fully restore and maintain the worn out soil, but the actual addition of fertilizing materials to the surface from without; thus returning to it what the course of former tillage had abstracted. All vegetation depends for its growth upon the supply of the elements which constitute its various parts, and enable the organs of the vegetable to elaborate its structure. Manures are those materials which supply plants, directly or indirectly, with these constituent elements. The highest agricultural skill implies much more, than neatness and perfection of the mechanical processes of cultivation. It implies a knowledge of these constituents of vegetables and of the chemical composition of the soil. Such knowledge enables the agriculturist to determine with certainty what the soil requires, to produce any particular class of plants, and to apply his manures with the greatest possible efficacy and economy. It also enables him to accumulate and preserve the essential food of plants, which is suffered, to an extent quite incredible, to go to waste, in the form of drainage from barn-yards, cattle sheds, manure heaps, and kitchens; of animal and vegetable refuse and offals, and also in the form of gaseous exhalations from these sources. Liebig says—"that with every pound of ammonia which

evaporates, a loss of sixty pounds of wheat is sustained, and that with every pound of urine, a pound of wheat might be produced," and he truly adds, "that the indifference with which these liquid excrements are regarded, is incomprehensible." The skilful farmer will so manage as to save if possible every drop of this liquid manure.

The drainage of the cattle sheds contains, it has been said, the essential elements of vegetables in a state of solution; yielding ammonia, potash, soda, lime, magnesia and silica, with albumen, mucus, chlorine and several acids. So of the drainage from manure heaps and barnyards, consisting of urine and the richest matter of dung and compost. The washings, scourings, and drainage of kitchens and houses, contain animal and vegetable refuse, &c., prolific in ammonia, fatty matters rich in carbonic acid, and soap, a compound of fat and soda. The highest evidence has been given of the importance of these ingredients. These liquids applied directly to the growing crops, or, to all sorts of vegetable refuse, weeds, stickheaps, &c., to convert them into manure, will amply repay the care bestowed.

The gaseous exhalation carries off the carbonic acid and the vegetable and animal substances in the manure heap during the process of fermentation.—They escape in the form of ammonia and carbon; thus losing the best part of the manure which evaporates first. The maxim is, that "nothing be allowed to run away in the form of a fluid, or fly away in the disguise of a smell."

With respect to the refuse vegetable and animal matters of the farm, it may be stated, that whatever has had life or contains the materials of which the living structure is composed, ought to be preserved for manure. Hence the various weeds, stubble, grass, leaves, ditch-scourings, saw dust, bones and other animal matters should be collected, as useful in furnishing directly the proper constituents of future vegetation, or for admixture with other highly azotized substances. Many of the vegetables which may be collected about a farm contain much more nitrogen than the straw of grain; and are also very rich in the inorganic elements, especially the saline, giving the farmer the means of greatly increasing his compost heap. For this purpose the animal matters which may be gathered, are still more valuable, as they may be mixed with any earthy substance; and flesh, bones, hair, wool, &c., are extremely useful to vegetation, giving off during decomposition much carbonic acid and ammonia. It has been found by actual analysis, that 154 lbs. of flesh, bones, blood and hair, contain as much nitrogen as 1000 lbs. of farm manure, and a carcass of a dead horse is believed to be worth more than a ton of the best quality of such manure.

The above remarks indicate the necessity of much greater attention to the collection and preservation

of manures than has heretofore been given to the subject. Combined with proper depth of plowing, and a suitable application of fertilizing constituents to the crops according to their nature, it is confidently believed, that the care and skill of the farmer thus employed, would be immediately rewarded by the greatest yield, at the smallest cost; which must ever be the aim of the highest cultivation.

Should it be thought desirable to pursue the subject, it may hereafter be inquired what is the best plan for economizing the manures which may be made upon the farm—with reference to quantity, quality and expense.

A. L. H.

Lancaster, Nov. 17, 1851.

Agricultural Nuisances, No. 1.

PIGEON WEED, STONE WEED, STONE SEED, FALSE GROMWELL, WHEAT THIEF, STEEN CROUT.

French. Gremil des champs. *German.* Acker steinsame. *Lithospermum arvense, Linnaeus.*

The genus was established by Tournefort; it now contains about sixty species, six of which are natives of the United States, and two or three foreign ones have been introduced. The name is derived from the Greek *Lithos*, a stone, and *sperma*, a seed, from the stony hard appearance of the seeds.

The one under consideration is a native of Europe, but is extensively naturalized, and in this country it is a very serious nuisance. It belongs to the 5th class Pentandria, and 1st order Monogynia, in the Artificial system of Linnaeus,—to order Heliotropæ of Endlicher, and Boraginaceæ in Gray's Botany of the Northern United States.

The stem grows from six to eighteen inches high, usually much branched, and covered with bristle-like hairs. The leaves are from one to one and a half inches long and from one-third to half an inch wide, the widest part above the middle tapering gradually to the stem, both sides covered with hairs. The flowers are small, of a funnel form, in the axles of the leaves generally near the top of the stem, yellowish, or white. The seeds are four naked, rough, long nutlets, at first milk white but brownish when mature.

This plant often almost covers the wheat fields in May, and seems to be peculiarly destructive to wheat, and when it once gets into the ground it is quite difficult to exterminate. It is never very bad, if it does not get a start in the fall, but early sowed wheat often suffers seriously.

Once ploughing, and that quite late, has been tried with success. But rotation of crops and constant culture will bring the seeds near the surface when they quickly germinate, and thus, in a few years, the seed may be exhausted, provided the plant is kept from producing a fresh supply. In harvesting the wheat, it should be cut above the top of this weed, if not, it will be necessary to destroy the straw, for if the seeds are carried into the barn yard, there is but a poor prospect of getting rid of the plant on the farm.

J. M. McMIXX.

Unionville, Nov. 15, 1851.

Birds and Insects.

MR. EDITOR:—In a former number of your Journal, I observed a communication, calling the attention of readers to the importance of farmers preventing, as far as possible, the wanton destruction of insectivorous birds. At the time the article appeared, I was deeply impressed with the importance of the subject, and subsequent reflection has strengthened my impressions.

Why birds should be made the subject of such an exterminating warfare as is now waged against them, and why farmers will permit this work of destruction to be carried on, upon their farms, is to me a matter of great astonishment. Surely, no farmer, who values sound fruits, fine vegetables, or even good timber will permit these inroads of gunners upon his premises.

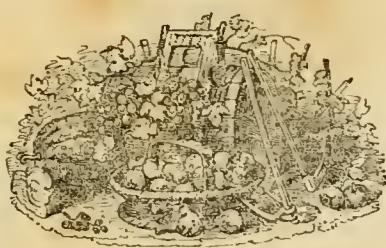
I am very well aware that many farmers consider the destruction of birds a small evil, while others, although convinced of the importance of the matter, good naturally permit it, rather than drive from their farms the lazy fellows who invade it for this purpose.

To those who consider the evil one of small magnitude, I would say, that the reading of the able articles on Entomology which have recently appeared in your Journal, ought to satisfy them that noxious insects are alarmingly on the increase, and that unless a check be put upon the destruction of birds, we shall soon be overrun by insects to such an extent as will set all our efforts to get rid of them at defiance. Already we have complaints from every quarter.—The ravages of the corculio are seen every where, and experiments are making in every direction for the purpose of ascertaining some method by which to get rid of them. Twenty years ago, it was not known as a dangerous enemy to fruit growers, and even now, comparatively few persons know what insect it is that stings their choice fruit and causes it prematurely to decay and fall to the ground. More attention to this subject is imperatively demanded by the exigencies of the case.

To the farmer who is too good natured to drive from his premises the lazy fellows who prowl around them, destroying the little birds, breaking down the fencing, and very frequently carrying away every thing they can lay hold of, I would say, cease to be good natured in this particular. By permitting such work to go on, you are inflicting a serious evil upon yourselves and upon the community. You are encouraging idleness and wanton cruelty. Let public warning notices be given. This can be done at a comparatively trifling cost, where eight or ten farmers club together, and if this will not prove effectual, then the last hope is in legislative aid. We must have a law to protect the birds, or we shall shortly be compelled to do without fruits.

T. S. CURTIS.

Nov. 15, 1851.



Horticultural Department.

American Seedling Pears.

MR. EDITOR:—Of course you and I are unequainted, except through the columns of the *Horticulturist*, where I frequently see your name. I observe that you pay considerable attention to pears and especially American seedling pears. For some time I conducted an Ohio nursery, but I am now located on a large tract of thin chesnut land, or rather land with a great mixture of timber including several varieties of oak, hickory, poplar, dogwood, &c. The land is broken into ridges which rise over two hundred feet above the valley of the Walhounding, in which is the canal of that name. On the summits of these ridges fruits seldom fail, and my young orchard had a moderate crop this year, one of great failure in the west.

I have been thus full in order to show you that so far as land is concerned, I am admirably situated for planting large orchards, and my old profession of nurseryman enables me to hope I am not wholly incompetent to the task. Situated as we are on the canal which connects with all the railroads of the State, I am much in hopes the planting may be profitable, and I am certain it affords me inestimable delight.

Being so favorably situated, with so much cheap land, Mr. Humerichhouse, of Coshocton, a western amateur planter, the other day asked me to accept of him a number of trees to set out on trial, for which he had not room. This has suggested to me that many persons about cities and town may be similarly situated and that they might take pleasure in originating seedling pears and presenting the most promising to a person who, like myself, had plenty of room and who would take the trouble to mark them and inform them of the result. Or to furnish small packages of seeds from the choicest varieties, but especially from the very best American seedlings, on condition that I should grow the seeds in each package separately, marked with the name of the contributor, and if any one or more of them should prove fine, call it after him or members of his family.

When it is recollect the time and culture necessary to produce a bearing state, it seems to me I offer to make the honor of originating fine fruits to city amateurs very cheap. I have as yet only about thirty acres in orchard, but I have room for more than five

hundred acres of the best fruit ridges I have seen between the great lakes and the Mississippi, and I intend to plant three hundred acres as soon as my means will permit, and I expect after this year to see about thirty acres per annum.

The seedling pear trees which I shall continue to grow for myself, and which I may receive from others, I shall set out when of proper size without budding and leave all that promise well to grow and bear until fully proved; budding them just as fast as they demonstrate themselves unworthy. Those seedlings which give only moderate promise, I shall bud at high standard height and leave a single limb to prove the seedling.

Believing it possible that you or some of your horticultural friends might take interest in this matter and send me small trees or seeds, I have addressed you this note. The trees should be only one year's growth, and of these only the highly promising. I wish pears only, as I have very numerous varieties of peaches and apples bearing, from which I am collecting and planting seeds. I have many pears also from seeds.

I will state to you a few of my speculations and practices, forgetting perhaps, the many opportunities you have of many interesting conversations, while I am so circumstanced that on the subject of fruit cultivation my converse is chiefly with trees as they grow in the nursery, or as they are to be removed from the primeval forest—giants to be made to give way to the pygmies I have reared. A great whirlwind, however, twenty-three years ago, did most of the giant work for me, and I have to contend chiefly with a dense young growth which sprung up after the storm, which left not a tree in the main line of its course. It threw the tops from either side inward, and twisted numerous hickories of considerable size, say from twelve to twenty inches, as a man would a withie. Now for the practices and speculations.

I. I decidedly prefer to grow all the hardier varieties of the apple, pear and peach on their own roots. I believe the trees are longer-lived and the fruit more perfect, and beside, in the event of any injury a sprout even from the root may rapidly and conveniently replace the tree. For a congenial soil, no root is so perfect for any tree as its own. I am not prepared to say trees sometimes may not flourish better where the soil or climate are very uncongenial, on a stock better suited to such climate or soil; but, in my opinion, the cases are very few, and rarely if at all with the attention of the market orchardist. Apples, root grafted so as the graft may take root, do perfectly well, or raised from layers do equally well. Pears would do equally well, but the graft in seven cases out of ten roots, and very frequently the stock dies.—To meet this difficulty, I bud the stock and then layer the bud when about a foot long, the first summer. If the stock is strong, I insert several buds and when

the buds are about foot long bring the whole under ground by cutting the stock about two-thirds off and shaving it off to the root so as to bend over easily and without breaking. But when I have once attained a variety on its roots, I can multiply it both by layers and by divisions of the roots. I must confess, however, they are sometimes tardy in growing. The most successful mode I have tried, is to shave down the stalk about six inches above the ground so as to bend handsomely, then at a point which will allow the layer to go the proper depth into the ground, cut it half off as if tongueing it and shave the layer side of the upper division so as it will bend snugly, and then insert it in the ground in an upright position—sometimes first tying a leather string right in the upper part of the open split, so as to check and finally cut off the circulation between the layer and root, and thereby force it to form its own roots. With peaches and apples this is almost certain to be successful the first year, but pears are often refractory.

2. Next (for my sheet is almost full) I have observed that chance trees grow finely when they spring up in places where there is considerable decaying brush bones, &c. Following this idea up I have tried throwing brush around young trees so thick as to keep the weeds and grass down—in other words, to mulch with brush with the leaves on. It answers well. Pursuing the same idea still further, I am having holes dug four feet in diameter right through a portion of the brushwood or fallen timber, of which I spoke, in which I intend planting peaches, apples and pears, and when the leaves are fully developed in June, I shall cut the brush down, trim it and pile around the trees which will give each tree quite a handsome quantity, so as to keep the roots moist and cool for a considerable distance, and the decay of the leaves and brush, I hope, will act as a manure and keep the ground so loose as to render plowing and hoeing unnecessary. I will try only a few acres this year. Will it do? May it not prevent blight and make trees longer lived, from the absence of wounds from plowing and digging. Straw and manure, lime and ashes can be superadded. Nature manures altogether on top.

Yours, E. NICHOLS.

Walhounding, Coshocton co., Ohio, Sept. 1851.

[The above communication, not originally intended by the writer for publication, was handed to us by a friend to whom it was addressed. We most cheerfully give it a place, and at the same time, ask for it the attention of those who feel an interest in the propagation of seedling fruits. The offer on the part of Mr. Nichols, is certainly a liberal one, and if embraced to any extent, might result most advantageously to the fruit growing interest of the country at large.—ED.]

15,000 bushels of apples have been sent to the Eastern market from the Genesee Valley this season.

Renovating Outcasts.

MR. EDITOR:—In a cotemporary work is a long article with extended remarks by the editor recommending confidently a method of “renovating outcasts,”* closely followed in the following experiment which—though unsuccessful—is at your disposal.

In the autumn of —, forty-nine trenches, three feet wide and two feet deep were dug around two pear trees,—butter pear of your county (Doyenne blanc). The earth, except a few inches of the top was carted away. All roots encountered smoothly cut off. The trenches were filled with this top earth and swamp muck which had been exposed to frost and sun; carefully mixed with charcoal and ashes one-tenth, potash, sulphate and oxide of iron, and pulverized bones of each about one pound.† The following spring the trees were severely headed in, at the same time inserting, in some branches, grafts of the Bartlett. These scions as well as the original stock grew vigorously but the pears produced, on the latter, were cracked and worthless. Looking with interest for a crop last autumn you may judge of my disappointment to find them worthless as before.—But what is strange yet not new, the Bartlett pears grown on the engrafted limbs were perfect. Now until it is demonstrated by chemical analysis, that Doyenne contain elementary constituents which Bartlett's do not, we must be allowed to dissent from the entire chemical theory, as well as this system of renovation.

J. K. ESHLEMAN.

Chester co., Nov. 22, 1851.

* Horticulturist, vol. 1, p. 225.

† Lime was not added, because in making the trenches an old foundation wall was encountered the mortar of which furnished an abundance.

Germination of Clover Seed.

MR. EDITOR:—Conceiving that it might be of practical benefit to perhaps a few of the readers of the *Farm Journal*, I will state a plan of securing the germination (or as some term it) the taking of Clover Seed. It is a well known fact that with old lands which have undergone a continued course of cultivation for a number of years, grass seed, especially clover, is not apt to take well. To remedy this, I concluded in the spring of 1850, to try a plan which I had heard several times recommended as being of great utility in securing the germination of Clover. It is simply this. Take a very light one-horse iron-toothed harrow with the teeth protruding about 3 inches below the under side of the frame or bars; let this follow directly after the sower. The frame should be made as light as possible with the teeth a little closer than the ordinary large harrow. It should be hinged in order to avoid scraping or rubbing out the wheat on the ridges and also to lap in the furrows.—There need be no fear of injuring the wheat but on the contrary it would be of benefit to it. I have pursued the above plan and it has overreached my most sanguine expectation.

CHARLES MYERS.

Wyoming Valley, Pa., 1851.

Horticultural Societies.

Proceedings of the Pennsylvania Horticultural Society.

The stated meeting of this Society was held in the Chinese Saloon, Philadelphia, on Tuesday evening, November 18, 1851. The President in the chair.—This being the show night for Chrysanthemums, there were eight collections presented; in which were many of the choicest kinds; the contributors were Robert Buist, James Bisset, gardener to Jas. Dundas; Geo. North, Maurice Finn, John Lambert's gardener; Alexander Parker and Jno. Ellis, gardener to Caleb Cope. The collection by the latter consisted of those new and beautiful varieties called the *Liliputian* which has but recently been imported, and for the first time shown; and are decidedly the prettiest of this tribe of plants. A collection of plants in pots by Maurice Finn, gardener to Jno. Lambert was interesting. The President's gardener exhibited another of those exquisitely beautiful baskets of cut flowers which has graced the tables on former occasions, containing the choicest flowers of his houses, of which many were from air plants: but as heretofore the crowning flower was the *Victoria regia*, the 24th production of the plant, although of smaller proportions than those borne by the plant when in full vigour, still it was a perfect gem, and much admired. Among the fruits were three tempting bunches of Black Hamburg Grapes from H. W. S. Cleveland, Burlington, and beautiful specimens of Pears, some luscious in taste, which came from H. W. S. Cleveland, Isaiae B. Baxter, N. W. Roe of Woodbury, A. M. Eastwick, J. P. Cushing, Mass., the Dix; and a specimen of the pound Pear which weighed 22 ounces, from the late State Fair at Harrisburg. Several dishes of apples were also shown, and from David Miller, Jr., Carlisle, the Fallen walder, Pittsburgh pippin, Better-than-good and Herman's favorite; from Jas. H. Watts, of Rochester, the Northern Spy; Chas. Lee, Penn Yan, N. Y., the Wagger; Mathew Makie, the Clyde beauty. Of Vegetables, Anthony Fulton, Jr., exhibited extensive tables; and Maurice Finn, gardener to John Lambert, John Gallagher, gardener to Miss Gratz, and Thos. Meehan, gardener to A. M. Eastwick, very creditable displays, indeed. A radish of immense proportions was noticed from the farm of Michael Magee, of Lower Merion.

The following premiums were awarded by the Committee on plants and Flowers: *Chrysanthemums*, for the best 12 specimens to Robt. Buist; for the second best, to James Bisset, gardener to James Dundas; *Plants in pots*, for the 2nd best and most interesting collection to Maurice Finn, gardener to John Lambert; for the third best to John Ellis, gardener to Caleb Cope; *Bouquet*, for the second best to Robt. Scott; for the best hand bouquet, to Robert Kilvington and for the best basket of cut flowers to John Ellis.

By the Committee on Fruits: *Pears*, for the best twelve specimens to H. W. S. Cleveland; for the second best, to Isaiae B. Baxter; *Apples*, for the best twelve specimens to James H. Watts, Rochester, N. Y.; for the second best to Charles Lee, Penn Yan, N. Y. And a special premium of two dollars for three bunches of black Hamburg Grapes to H. W. S. Cleveland. The Committee noticed for the second time this autumn, a branch of the Cushing Raspberry, bearing ripe fruit, shown by Dr. Brineké.

By the Committee on Vegetables: *Celery*, for the best six plants blanched to Alfred Felton; for the second best, to Thomas Meehan; *Broccoli*, for the

best five heads to Anthony Felton, Jr., *Brussels Sprouts*, for the best six stalks to John Gallagher, gardener to Miss Gratz; for the second best to Maurice Finn; *Vegetables*, for the best and most interesting display by a market gardener, to Anthony Felton, Jr., for the best by an amateur gardener to Maurice Finn; for the second best to John Gallagher. And a special premium of two dollars to John Meehan, for a fine and interesting display of vegetables.

Intermediate report of the Fruit Committee: The first Committee respectfully report that since the last meeting of the Society the following fruits have been received:

From David Miller, Jr., of Carlisle; *Apples*, Herman's favorite, Pittsburgh Pippin, Better-than-good. Jonathan, Fallen Walder, Vandever, Hettlerich seedling, Red favorite, Fall sweeting. From J. P. Cushing; *Pears*, the Dix in great perfection, very fine. From James H. Watts, Rochester; *Apples*, the Northern Spy, splendid specimens. From Chas. Lee, Penn Yan, N. Y.; *Apples*, the Wagener.

The President took occasion to make some remark s tendering his acknowledgments for the unexpected compliment by the Society of the handsome award of the gold medal for his having successfully cultivated the *Victoria regia*, and to announce that he had just received a very interesting letter from Sir Wm. J. Hooker, of the Royal Gardens at Kew, (whence came the seeds of this Victoria) which was read, in which he stated that he was much gratified with the success which crowned Mr. Cope's exertions in the cultivation of the Victoria. He also remarked that he had sent seeds of the plant to Calcutta and the West Indies, and that plants had grown in the open waters and ripened seeds abundantly. Mr. Cope stated that the plant which he had growing the garden tank, had, when it was taken up a few days ago two flower buds thereon.

A communication from A. H. Ernst, President of the Cincinnati Horticultural Society, expressing a desire to have such an arrangement of the great Exhibitions of the prominent Horticultural Societies, that the members of each could attend those of the others and thus be mutually benefitted, which was read and referred to the appropriate Committee.

The Committee on establishing premiums report a Schedule for 1852.

Thirteen members elected.

THOMAS P. JAMES,
Receiving Soc'y.

Communications.

Calomel for Chickens.

MR. EDITOR:—As some of your readers may have chickens suffering with a disease similar to that which I am about to describe, the means by which I succeeded in relieving mine, may not prove uninteresting to them.

A few weeks since a favorite hen of six months old, began to droop, and soon after I observed her gasping in such a manner as led me to believe that she was troubled with the fasciolæ, the small parasite worm, which sometimes adheres to the inner membrane of young chickens' windpipe. Under this impression I administered turpentine, but with no other perceptible effect, than to increase the hen's illness. A slender wire, and subsequently a small feather divested of its web, except at the farther end, were used

to dislodge the worms, but without success. A mixture of black pepper and fresh butter was next given her, and this, like the other two remedies, proved ineffectual. At this time the condition of the hen was truly pitiable. The disease had so weakened her, that she could scarcely walk, and I began to think her a "gone case." A white foam completely covered both her eyes, so that it was impossible for her to see. She refused food and drink entirely and gave every indication of being upon her last legs. Unwilling to lose her without another effort, I procured two calomel pills containing one grain each, and gave them to her. It was with but faint hopes of seeing her alive the next morning that I placed her in a comfortable coop. Much to my surprise, in the morning, when I opened the coop, there stood my hen, her eyes perfectly clean of foam, and the gasping nearly gone. I offered some food, which she devoured with much apparent relish. She also drank water freely and from that day she has continued improving.—Whether the cure is to be attributed to the calomel or to some other of the other remedies, I will not pretend to say, leaving that point to be decided by those better versed in the art of chicken-doctoring.

These are the facts, and I submit them for what they are worth.

S.

Lancaster, Nov. 18, 1851.

[The disease referred to by our correspondent is evidently the *roup*, an affection of the head, which generally proves fatal, or permanently weakens the fowl attacked with it. Calomel is not a new remedy, it being recommended by English fowl breeders. It is asserted by some that the *roup* is contagious, and that the best means of preventing its spreading through the entire flock, is to chop off the heads of those first affected. There may be truth in this, although we cannot subscribe to it in full. Fowls are rarely attacked with it until they are six months old, at which time, they are not in full plumage. Exposure to the chilling rains and cold winds of autumn and winter, during which seasons it most generally prevails, acts powerfully upon their scantly protected bodies, and the result is cold, which settles in the head and throat, causing the discharge from the nostrils and frequently the eyes—great difficulty in respiration, and such inflammation of the throat as makes swallowing painful. We have never known a case of *roup*, where the fowls have not suffered from exposure, although it is proper to say that our opportunities for observation have not been very extensive. Our friend Taggart, of Northumberland, or some other of our correspondents will do us a favor by furnishing more satisfactory information upon this subject.—ED.]

It is said that there is a plant, growing in the hot springs in Iceland, which not only flowers, but bears seeds, in water hot enough to boil an egg.

We don't believe it.

The Banquet.

[CONCLUDED.]

We subjoin a few of the volunteer toasts, with a brief synopsis of the remarks made by the gentlemen especially complimented.

Mr. Williamson, of Huntingdon, proposed the health of the Hon. Frederick Watts, President of the Pennsylvania State Agricultural Society.

To which Judge Watts responded. He said that when elected President of the Society he was absent on professional duties, which prevented his attending the farmer's convention last January, when the Society was organized. He spoke of the unmistakable evidence of Providence having, in a peculiar manner, favored the efforts of the society so far, and of his entire confidence in its approving smiles and abiding protection. His remarks were listened to with profound attention, and inspired all present with the same confidence, in a long and useful career of usefulness, in the good work, so well begun, and carried on, since the society had been instituted.

Col. Frazer, of Lancaster, made a few pertinent remarks on the patriotism and friendship that so long had united, in sentiment, the Old Dominion and Pennsylvania, and gave—

Hon. Andrew Stevenson, of Virginia:—The orator of the day.

Mr. Stevenson having previously retired, Benjamin E. Rush, Esq., of Philadelphia, rose and begged the company not to think him presumptuous in undertaking to speak the thanks of Mr. Stevenson; who, were he present, could so much better discharge the duty himself. But inasmuch as he had the honor of acting under the distinguished statesman of Virginia, while representing the United States at the Court of St. James, he was constrained to improve the moment by thanking the company for the honor they had done his friend in drinking his health.

The President then gave—The pioneer of the Pennsylvania State Agricultural Society. And afterwards enjoined, he alluded to Mr. Gowen.

Mr. G. being called upon said, that when the toast was proposed, he did not think it referred to him.—He felt somewhat embarrassed, if not overwhelmed, by the flattering position in which it placed him.—The Philadelphia Society for promoting agriculture of which he was for years a zealous member, and now its President, was the pioneer of the Pennsylvania, and all other agricultural societies in the United States. He stated that as far back as some fifty or sixty years, a committee of the Philadelphia Society, consisting of Judge Peters, George Clymer, Timothy Pickering and John B. Bordley, made report to that society on the expediency of a State institution, which report suggested the principles and provisions embodied in every State agricultural society's constitution he had read; therefore, he said, these patriotic worthies, or the Philadelphia society, was the pioneer in

this connexion. But, Mr. G. said, he could not but claim some credit, as an individual, in bringing about the never-to-be-forgotten farmer's convention at Harrisburg, which happily resolved itself into the Pennsylvania State Agricultural Society. He then made some remarks as to the gratification it afforded him on witnessing such a noble assemblage of farmers as met in convention at Harrisburg, in January last, and at the agricultural exhibition just closed. He had a few years back participated in several of the New York Agricultural Exhibitions, and ever impressed with a high sense of the wealth, spirit and intelligence of the agriculturists of New York—especially of Western New York—but not even they, nor any body of farmers he had ever seen elsewhere, could surpass in those attributes collectively, the farmers of Pennsylvania. These had met in convention—had met at their first State Exhibition—had conjointly put their "hand to the plow," and who could believe that such men would ever "look back?" He congratulated the society on the success of the exhibition they had just made, and the prospect it shadowed forth, for farming in Pennsylvania in the future. His remarks were applauded.

Mr. Gowen again rose to say that when last up he had intended to propose the health of a gentleman from Lancaster on his right, and begged leave to repair the omission. Lancaster, he said, was the place he had ever contemplated, while meditating a State Society, for holding its first exhibition, but Harrisburg had nobly carried off that honor. He then gave

The health of Col. Reah Frazer, of Lancaster.

To which Col. F. responded in his usual happy style.

The health of Gen. Cameron was proposed to which that gentleman responded.

A. S. Roberts, Esq., of Philadelphia, proposed the health of the Board of Canal Commissioners.

Col. Painter, President of the Board, returned thanks for himself and colleagues. He took occasion to say, that he was sorry to find that complaints had been made of the want of facilities on the State road for the forwarding of passengers and stock to the exhibition, which if well founded, he greatly regretted. That if suitable means had not been provided, the Board of Canal Commissioners was not responsible for the omission, having control only of the motive power on the road, which had been ordered, in due time, to be ready to any extent required. If the instructions of the Board had not been fully complied with, in that particular, it would be matter of deep concern to himself and colleagues. He said he was a farmer, and whether as a public functionary or private individual, he would be found ever ready to promote, as far as in his power, the objects of the Society. He concluded by saying, that the progress making in the public works, would soon overcome the barrier that separates western from eastern Pennsyl-

vania, which, when fully accomplished, would enable the farmers of both sections of the State to co-operate more efficiently in promoting the cause of agriculture.

Ladies Department.

Make Home Beautiful.

BY MRS. L. G. ADELL.

Those who live in cities and compact villages can do little to make a residence attractive, otherwise than a fine display of architecture, but those who live in the country can make the lowliest dwelling a place of enchantment and beauty.

The neat white cottage or even log cabin with its green vines hanging about the eaves, and trained around the windows, with its simple beds of flowers adorning the walks, and filling the air with fragrance is a refreshing sight even to the eye of the traveller, to whose mind is presented an idea of happiness and beauty sweetly blended together.

The landscape scenery of our country might be greatly improved if the various *owners* of each farm made his own place and home attractive with neat fences and ornamental trees, walks and flowers. It would not only enhance the value of individual possessions, and increase the actual worth and price of a farm, but as "*a thing of beauty, is a joy forever!*" Who can estimate the comfort and delight of a tasteful home! Every tree, and shrub, and flower, has a blessing for the heart which soothes and refreshes the weariest hours.

There is no mind so dull and insensible, but will secretly admire the cultivated grounds, and pleasant domains of a man of taste, and even wish his means were sufficiently ample to own such a home! Does not every farmer in our land possess means amply sufficient to make his own home beautiful and valuable and something to be desired? There are many *spare hours*, and if applied to laying out a neat yard, setting out trees which shall answer the treble purpose of fruit, shade and ornament, bordering a walk, and making and enriching a bed for flowers, he is not idling or wasting his time, but doing that which shall be to his own heart and that of his wife and children a continual feast of *enjoyment* while he lives, and adds dollars and cents to its real value, besides being a public blessing and improvement. Who likes to travel through regions that are merely inhabited, without being enlivened with one spot of beauty or of taste to cheer the lonely and weary heart. The English tourist pictures to our minds the green hedges and smooth verdant lawns, and vine clad cottages, and all the common landscape scenery as charming to the eye as a cultivated garden. Why may not American farmers have some reference to beauty as well as use? If all should do so, how soon would the scene be changed, and the neglected spot "bud and blossom as the rose."

Late in the fall any tree or shrub can be transplanted, as long as the ground remains unfrozen.—The suckers that come up from the roots, will make nice trees, and flowering shrubs when set out well in the fall, will put out leaves in the spring, and soon gain an independence of growth that will be quite surprising. From these, one can cover up unsightly places, and provide themselves as much fruit and shade and ornament as they choose with little trouble and time. Let nothing be lost of this kind, but give it a place, and it will more than repay all your trouble. The females of a family can aid in these matters, and their taste will often be found a valuable regulator and safe guide—they love the flowers, neatness and order, and some homes would possess little of charm or of beauty were it not for their skill and effort.

The contrast we have all seen. The great house, large farms, rough fence, weedy yard, and treeless premises, and not even a rose-bush under the window or by the door—or what is still worse, the old neglected abode, leaning fences, promiscuous growth of all sorts of things that choose to grow, making for all the inmates a cheerless, desolate home, without external beauty, or any thing to cheer the heart within.

Chittenango, N. Y.

Longworth's Sparkling Catawba.

Our esteemed friend Dr. Brincklé has laid us under obligations for a bottle of this truly delicious wine. Distrusting our own judgment in the matter, we called in a few friends who had a reputation that way, to assist us in pronouneing upon its merits.—The first sip, however, satisfied us that our precautions were unnecessary, for although not a habitual wine drinker, we had no hesitation in pronouncing it decidedly the finest champagne we had ever tasted. Our friends agreed with us unanimously, and we congratulated Mr. Longworth upon the happy success which has attended his efforts to introduce its manufacture into the United States, and that too, from our native grape. In a recent article in the *Western Horticultural Review*, Mr. Longworth says:

"We are soon destined, not only to supply the United States with wine, but to export it largely.—Most persons say, that they would not be willing to run over their earthly course. I would willingly do it again, even if I had but one change. The fore-thought, earlier in life, to commence the raising of seedling grapes, from our best native varieties, and a mixture between them and the best foreign. I, this season raised a few thousand of the former character, and of one superior variety, have 800 plants of extra growth, and shall be disappointed if I have not grapes of black, white and red color among them, equal in the size of the grape and the bunch, to the Black Hamburg, and its rival in quality. Two or three years will test the question. I add this to induce others to follow the example."

The following paragraph, which we copy from one

of our exchanges, shows to what extent wine growing is already carried on by Mr. Longworth and others in the vicinity of Cincinnati:

"In Cincinnati and neighborhood not less than one thousand acres of land are devoted to the culture of the grape for making wine. A writer in the newspapers says that on a visit to Mr. Longworth he saw 75,000 bottles of sparkling Catawba, and about 40,000 gallons of wine in casks, varying from 40 to 50 gallons in each. This cellar is 120 feet long, 40 feet wide, and 40 feet deep; and it is the intention of the owner to increase it to double this size during the coming spring. Besides Mr. Longworth, there are many other persons in Cincinnati, and the neighborhood, engaged in the cultivation of the grape."

Seedling vs. Budded Peaches.

Reasons why budded peaches are tenderer than seedlings.

1st. About nine out of ten of our finest budded sorts are foreigners, many of which are not well adapted to our soil and climate, whereas our seedlings are mostly natives.

2nd. Our fine sorts, generally, say nine-tenths of them have small flowers. About the same proportion of the seedlings have large flowers, which protect them very much against late frosts.

3d. The wood of almost every first rate sort of peaches, as well as apples, pears, plums, cherries and grapes, is more plethoric and consequently more tender than ordinary seedlings. This is not caused by budding, but a common or natural defect in a great majority of our very finest fruits. The same rule will hold good when applied to animals, vegetables, flowers, or grasses and grains.

4th. A large majority of our finest sorts of peaches, whether seedling or grafted, have large fruit buds, much more prominent than ordinary seedlings, which render them more liable to be killed by severe cold weather than the inferior sorts.

5th. Budded or grafted trees are generally better cared for than ordinary seedlings, which has a tendency to produce a forced growth, and consequently renders the wood more spongy and less hardy.

6th. The budded or grafted trees forms fruit buds when much younger than seedlings. All know that the fruit on very young trees is much more easily killed than on old ones.—*Western Horticultural Review*.

[Last season it will be remembered that there were scarcely any peaches in Lancaster city or the immediate vicinity, (the severe late frosts having destroyed them) while at the distance of a few miles in every direction, there was an abundance of them.—This at first seemed strange, but a little reflection solved the difficulty. Nearly all of the peach trees in the city and vicinity are budded or foreigners, whilst those a few miles from the city are, generally speaking, seedlings. Of course there were exceptions; a few budded trees, being well filled with fruit; but as a general thing, the budded crop was a failure, while the seedlings were laden with fruit. We could not but regard it as a strong argument in favor of the superior hardiness of the seedling or native varieties.—En.]

List of Articles

Exhibited at the State Agricultural Fair at Harrisburg, together with the names of exhibitors and place of residence.

[CONTINUED.]

ROADSTERS & DRAUGHT HORSES.

1. Draught horse, 7 yrs, W. H. Wiler, Cumb'd co.
2. Draught mare, Sally, 7 yrs, Richard Parker, do.
3. Draught stallion, Badger, 6 yrs, Jacob Hoover, York co.
4. Draught mare, Columbus, 8 yrs, Wm. Ross, do.
5. Mare July, breed Maddock, 6 yrs, C. P. Steinmetz, Lebanon co.
6. Brood mare, 7 yrs, John Young, Harrisburg.
7. Draught horse, Charley, 6 yrs, A. O. Hiester, Dauphin co.
8. Grey Bill, breed unknown, C. Patterson, Huntingdon co.
9. Cobham, Cobham breed, 2 y. 5 mo, Jacob Rohrer, Lancaster co.
10. Jenny, cross-breed Kemble and English blood, 6 yrs, Wm. Taylor, Womelsdorf, Berks co.
11. Nell, breed unknown, 7 yrs, George Hull, Cumberland co.
12. Light draught colt, 2 yrs, J. Stenthebaker, York co.
13. Billy, light draught horse, out of Stranger, 3 yrs, J. D. Owens, Mifflin co.
14. Mare, breed Cumberland, 19 yrs, A. Hettrich, Cumberland co.
15. Mare, Cumberland, Lion breed, 8 yrs, do. do.
16. Stud colt, do. 29 mo, do. do.
17. Bill, 8 yrs, S. W. Sharp, Cumberland co.
18. Peacock, 3 yrs, Frederick Barrett, Bloomfield.
19. Horse, 2 yrs, John Reel, Dauphin co.
20. Roadster, 5 yrs, L. C. Smith, Clinton co.
21. Carriage horse, 10 yrs, J. Updegrafe, Dauphin county.
22. Lion, Chester Lion, Jeremiah Reef, Cumb'd co.
23. Rob Roy, 4 yrs, George Kinter.
24. Bay horse, 9 yrs, Mr. Runk, Lebanon co.

POULTRY.

1. Pair of Shanghae fowls, A. J. Jones, Harrisburg.
2. Cage of fancy pigeons, do. do.
3. Two Muscovy ducks, 1 yr, David Mumma, jr., Dauphin co.
4. Common improved chickens, 1 yr, do. do.
5. Poland chickens, 1 yr, do. do.
6. Pair of turkeys, 1 yr, do. do.
7. Pair mixed breed ducks, do. do.
8. Pair improved common ducks, do. do.
9. Pair common improved ducks, John C. Hiester, Estherton, Dauphin co.
10. Mongrel China and Bantam, age unknown, C. S. Haldeman, Lancaster co.
11. Cross of white Dorking & Creole, 6 mos., do.
12. English white Dorking, of this season, do.
13. Three pure games, 5 $\frac{1}{2}$ and 5 mo, David Taggart, Northumberland co.
14. Two Shanghaes, 5 mo, 13 days. do.
15. White Chittagongs, 5 $\frac{1}{2}$ to 4 $\frac{1}{2}$ mo. do.
16. Grey " " " do.
17. Brown " " " do.
18. Chittagong and Bantam, March 10 and March 29, 2 yrs, do.
19. Two white turkeys, E. L. Orth, M. D., Harrisburg.
20. Thirteen Creoles, L. P. Hoopes, Chester co.
21. Nineteen Jersey Blues, do.

22. Three pair Shanghae, 4 mo, W. Leonard, Phila.
23. Five " " 3 " do.
24. Five " " 5 " 1 a yr old, do.
25. Pair white Poland chickens, 5 mo, do.
26. Black Poland, 18 mo, do.
27. White English duck, 8 mo, do.
28. Pheasant Bantams, 18 mo, do.
29. English Pheasants, " " do.
30. Java Muscovy, 4 mo, do.
31. Chinese duck, 7 " do.
32. Walk-upducks, 5 " do.
33. Poland ducks, 3 " do.
34. Black Dominies, 6 $\frac{1}{2}$ mo, Samuel Brenizer, Harrisburg.
35. Game cock, 20 mo, Henry Loyer, Harrisburg.
36. Shanghae hen, 7 mo, do.
37. *Luris Natura*, 8 " do.
38. Swan geese, 2 yrs 6 mo, S. Manly, Dauphin co.
39. Pair China, 18 mo, J. M. Kelker, Harrisburg.
40. Four pair China, 4 mo, do.
41. Hybrid ducks, J. K. Eshleman, Chester co.
42. Pair Capons, mixed 5 mo, A. T. Newbold, Philadelphia.
43. Pair grey Capons, breed Grey Eagle, 8 mo, do.
44. Dorking and Jersey Blues, Joseph Cope, West Chester.
45. Fancy Pigeons, Brua Cameron, Dauphin co.
46. Russian ducks, 6 mo, Martin Newcomer, Franklin co.
47. Bremen geese, do.
48. Muscovy duck, 8 mo, Brua Cameron, Dauphin county.
49. Swan geese, 1 yr, do.
50. Creoles, 1 " do.
51. Polish, 1 " do.
52. Chittagongs, 2 mo, do.
53. Pair pure Shanghae, 5 mo, imported by Dr. Kerr.
54. Shanghae chickens, 5 $\frac{1}{2}$ mo, Benjamin Hood, Chester co.
55. Jersey blue chickens, 5 mo to 1 yr, do.
56. Game Capons, 1 yr, B. Cameron, Dauphin co.
57. Fancy rabbits, A. J. Jones, Harrisburg.
58. Golden Pheasants, 3 yrs, W. Leonard, Phila.
59. East India breed, do.
60. Seabright Bantams, do.
61. Two Guinea pigs, Barnum and Jenny Lind, 11 mo, 5 young.
62. Malagasear rabbits, 10 mo, Paschal Morris, West Chester.
63. Pure Shanghae cock, 12 mo, pullets 5 mo, A. M. Spangler, Lancaster.
64. Raccoon, 9 yrs, John Young, Harrisburg.

PLOWS, &c., ENTERED FOR THE PLOWING MATCH.

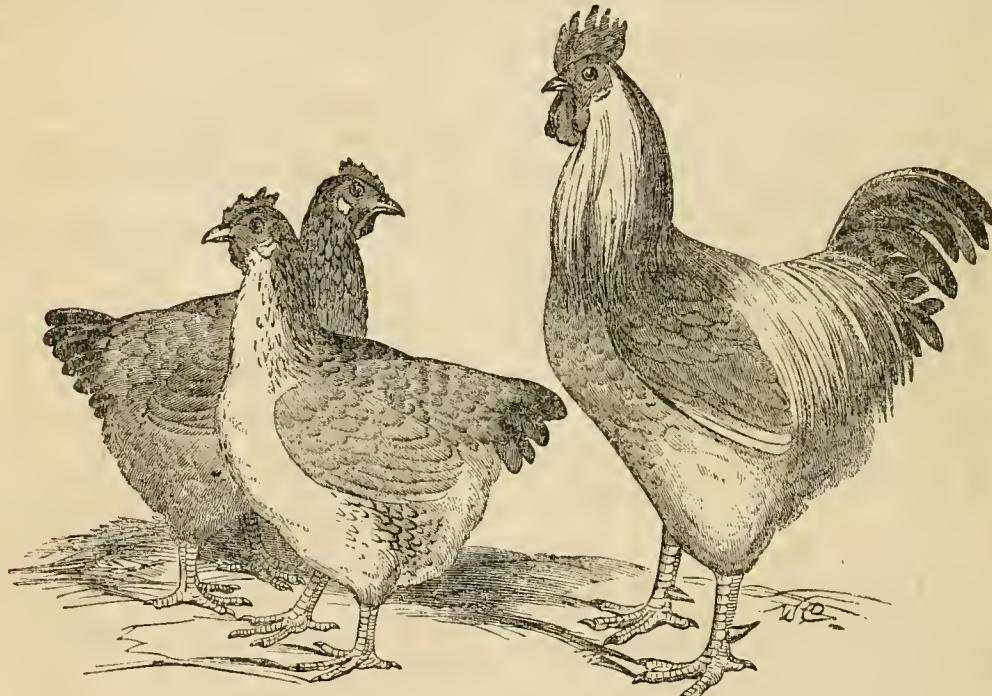
1. Two plows by Robert Hall, Pittsburg.
2. Plow by Jacob Bauman, Mechanicsburg, Cumberland co.
3. John H. Cressler one plow, Michael Cressler, Shippensburg, Curwensville co.
4. A Speelman's plow.
5. Plow by Samuel Plank.
6. Plow by J. B. Stoner.
7. Plow by Elisha P. Home, Hall & Speer, makers, No. 5, of Baltimore co. (ox team.)
8. E. G. Grey an iron plow.
9. Sod plow Jonathan F. Garrard.
10. Pair of oxen by John Echternach.

Improved Fowls.

WE ARE indebted to Messrs. E. H. Butler & Co., the enterprising publishers of Dixon & Kerr's popular work on Ornamental and Domestic Poultry, as well as many other elegant and valuable books, for the beautiful illustrations we give below. They are the same as those given in Dixon & Kerr, and are, we think, the finest and most beautiful ever offered to the American public. As we have received the entire set of cuts, we shall present them from time to time to our readers, through the Journal, in regular order, accompanying each with a description sufficiently full to enable them to judge of the merits of the various kinds of fowls now claiming public attention. As will be perceived, nearly all of the illustration are portraits taken from life, and hence may be

relied upon as faithful representations of the various breeds.

The following is a sufficiently minute and accurate description of this variety. The Cock, when full-grown, stands about twenty-eight inches high, that is, if he be a good specimen—the female about twenty-two or twenty-three inches. I have never seen a large comb or heavy wattles on the hen, at any age; whereas, the comb of the male is high, deeply indented, and his wattles double and large. I regard, however, as the chief characteristic of this variety, not the comb and wattles, nor even the reddish-yellow feathered leg, but the abundant, soft, and downy covering of the thighs, hips and region of the vent, together with the remarkably short tail and large mound of feathers, piled over the upper part of its root, giving rise to a considerable elevation on that part of the rump. It should be remarked, also, that



MR. E. R. COPE'S SHANGHAE'S.

the wings are quite short and small in proportion to the size of the fowl, and carried very high up the body, thus exposing the whole of the thigh, and a considerable portion of the side. These characteristics are not found in the same degree in any other fowl of which I have any knowledge. This peculiar arrangement of feathers gives the Shanghae fowl in appearance, what it has in reality, a greater depth of quarter, in proportion to the depth of brisket, than any other fowl. As to the legs, they are not very peculiar. The color is usually reddish-white or flesh-color, or reddish-yellow, mostly covered down the outside, even to the end of the toes, with feathers.—This last is not always the case. The Stag, in the preceding illustration, has no feathers on his legs, while the Pullets, his sisters, are rather heavily feathered. He is, however, an exception to the rule, so far, at least, as his particular family is concerned. But other families of Shanghaes, equally pure, are

but very lightly feathered. A gentleman of my acquaintance, Mr. A. Newbold, of Philadelphia, received, in the spring of 1847, from Captain Lockwood, direct from the city of Shanghae, a cock and hen, as pure as any Shanghaes I have seen, differing from other importations only in being nearly smooth-legged, and not attaining to the weight of other specimens. In the second or third generation there was scarcely a feather-legged Shanghae on the premises.

The plumage of the thorough-bred Shanghae is remarkably soft and silky, or rather downy, and is, in my opinion, equally as good for domestic purposes as those of the Goose. They are certainly quite fine and soft, if not as abundant.

The fertile qualities of this breed may be inferred from what has been attested concerning it. The gentleman from whom I procured the stock previously herein portrayed, wrote to me concerning the imported pair, that, although they had been for several

months from the ground, and, when they arrived, poor and verminous, yet, on turning them out about the latter end of May, from that time to the first of the ensuing October, the hen laid forty-eight eggs and hatched out two broods. The last brood included twelve chicks, ten of which he raised through the winter, thus proving themselves able to endure our ever-changing climate. I myself have found the pure Shanghae to equal, if not to excel, any other fowl in laying qualities—perhaps, the Black Poland Fowl or the Creole may lay a few more eggs in a year, in consequence of not being so frequently broody, but their eggs are not so rich and nutritious. Read the testimony of Mr. T. Ames, of Marshfield, Mass. He says, “that one of his neighbors, Mr. Phillips, has a pullet of this brood, which laid one hundred and twenty eggs in one hundred and twenty-five days, then stopped six days, then laid sixteen eggs more, and stopped four days, and is now laying; and that he (Mr. Ames) has one that has done equally well.” The eggs are generally of a pale yellow or nankeen color, not remarkably large compared with the size of the fowl, and generally

blunt at the ends. I have known but one thoroughbred hen that laid a long egg, and have never yet known one to lay what are called double eggs. The comb is generally single, though I have, in some specimens, seen a slight tendency to rose. I have never seen one with a top-knot.

The flesh of this fowl is tender and juicy, unexceptionable in every respect—in fact, a dish fit for an Emperor. In view, then, of the goodly size of the Shanghae, weighing, as the males do at maturity, from ten to twelve pounds, and the female from seven and a half to eight and a half pounds, and stags and pullets of 6 months respectively 8 and 6 lbs.—in view also of the economical uses to which its soft downy feathers may be applied, also its productiveness, hardness, and, lastly, its quiet and docile temper,—in view of these things, I am well pleased with pure Shanghaes. I know not a better fowl. In truth, I might say of it, as the pious Isaac Walton was wont to say of the trout, his favorite fish—“God might have made a better fish, but he did not;” so of the pure unadulterated Shanghae.—*Dixon & Kerr's Domestic and Ornamental Poultry.*



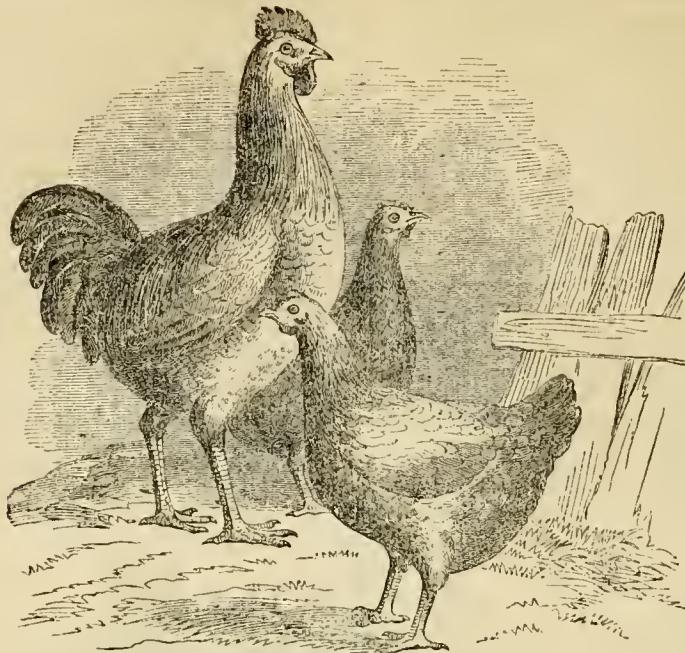
MR. R. COPE'S COCHIN CHINA.

(Imported.)

COCHIN CHINA FOWLS.

Very little is known of the origin of the Cochin China Fowl, further than that some gentleman, three or four years ago, presented a few to the Queen of England, who subsequently had them bred at Windsor Park. In order to promote their propagation, her Majesty made presents of them occasionally to such persons as she supposed likely to appreciate them.—They differ very little in their qualities, habits, and general appearance from our Shanghaes, to which they are undoubtedly nearly related. The Egg is nearly the same size, shape, and color; both have an equal development of comb and wattles, the Cochins slightly differing from the Shanghaes, chiefly in

being somewhat deeper and fuller in the breast, not quite so deep in the quarter, and being usually smooth-legged, while the Shanghaes, generally, are more or less heavily feathered. The plumage is much the same in both cases, nor have I discovered any difference in the Crow, it being in both equally sonorous and prolonged, differing considerably from that of the great Malay. Mr. Nolan says, “that full-grown Cocks, from one and a half to two years old, average a weight of from ten to twelve pounds, the Hens from eight to nine pounds. The male bird stands about two feet high; the female about twenty-two inches. . . . The Cock's comb is usually single, serrated, and erect, of a brilliant scarlet, but not al-



MR. G. P. BURNHAM'S COCHIN CHINA.
(Six and a half months old.)

ways single; I have had both single and double combs in the same clutch; the wattles are large; they are quite free from top-knots; the hackles on the neck and hips, yellowish-brown; the tail black, with metallic lustre, and, when fully furnished, presents the usual cock's plume; the legs vary from a flesh-colour to an orange-yellow, and are not so long as in the Malay; the Eggs are generally buff-colored, of large size and blunt at the ends; the Chickens progress rapidly in size, but further slowly."

E. R. Cope, Esq., of this city, and myself imported a few Fowls from London last summer; the three Cochin Chinas whose portraits precede this chapter, were of the number, and were procured of the Messrs. Baker of Chelsea, and are now in the possession of Mr. Cope, who has had a good opportunity for becoming acquainted with their habits and qualities.—His estimate of them is expressed in the preceding chapter, in the connection with the Shanghaes.

MANURING FRUIT TREES.—This is the season for the amateur to look over his fruit trees—especially those which have failed to produce good crops for want of nourishment in the soil. Carefully open a trench at the very ends of the roots—throw out a third of the poorest of the soil, and replace it with a mixture of manure and ashes. I use a cart-load of barn-yard manure—no matter if it is fresh—to a bushel of ashes, and I find it never to fail in bringing up the tree. If I wait till spring before I apply this stimulus—I find it to do just half as much good as if I put it on the soil in October and November. It is quite surprising how old fruit trees can be brought to by this simple dressing—barn-yard manure and ashes, applied in the fall of the year.—*Downing's Horticulturist.*

Book Notices.

Western Horticultural Review.—We have for some time past been in receipt of this excellent monthly, and always welcome it to our table with sincere pleasure. Its pages are filled with valuable contributions from able pens and we are glad to learn that the untiring efforts of its indefatigable editor, Dr. Warder, meet with the encouragement they so richly deserve. The Review is published monthly at Cincinnati, at three dollars per annum, and is, we think, well worth the money. Should any of our friends desire a sight of it, the can be gratified by calling at our office.

Hydropathic Encyclopedia.—No. 5, of this handsome work, published by Fowlers & Wells, of New York, is on our table. Its design is to present in a condensed and practical form all the important facts and principles in medicine and the collateral sciences pertaining to the water cure treatment. To those who desire a familiarity with this system, the work will be valuable. The typography is beautiful, and each number abounds with well executed illustrations. Eight numbers of one hundred pages each will complete it. Price 25 cents a number.

TO FATTEN POULTRY.—Shut them up in the dark—give them a little light two or three times a day, long enough to fill themselves with food, and then shut them up quite dark, and keep them there ten or twelve days at farthest.

THE FARM JOURNAL.

Assistant Editor's Department.

A. M. SPANGLER, ASSISTANT EDITOR.

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Those having business to transact with us will please call at the Book Store of W. H. Spangler, in North Queen street, Lancaster, where we or our representative will at all times be in attendance.

ABSENCE OF THE EDITOR.—The unavoidable absence of Prof. HALDEMAN for several weeks past, is the apology we offer for the want of our usual amount of editorial matter.

For the above reason it will also be out of our power to answer as satisfactorily as might be desired, the query of our friend of the *Banner of the Union*. We will, however, take the responsibility of saying, that the sentence referred to, was certainly not designed to convey the idea that we, as a people, should not justly be proud of the mechanical skill of our countrymen, or that our progress in almost every branch of the mechanic arts, was not fully equal to that of any of the nations of Europe. We most cordially endorse the sentiments of the editor of the *Banner of the Union* in regard to this honorable and most useful class of the community, and assure him that our respect for them is only equalled by our heartfelt desire to see them advancing still more rapidly than they are now doing, towards the highest position it is possible to attain. In saying this, we feel perfectly satisfied that we are but uttering the sentiments of Prof. Haldeman.

MR. STEVENSON'S ADDRESS.—We ask the attention of our readers to Mr. Stevenson's able address, which we give entire in the present number. It abounds in home truths, and will well repay a perusal. Owing to its length we have been compelled to omit the continuation of our article on the State Fair. We will give it in our next.

WHAT IS THE POSTAGE ON THE FARM JOURNAL?—This question is frequently asked us. We reply, the postage, if prepaid, is one cent per month, or three cents per quarter. All will see the advantage of prepayment, as it saves one-half.

OFFICE OF THE PA. STATE AGRICULTURAL SOCIETY,) Nov. 22, 1851. f

In accordance with the 5th section of the act incorporating the Pennsylvania State Agricultural Society, approved the 29th of March, A. D. 1851, the Presidents of the several County Agricultural Societies of Pennsylvania are required to transmit annually in the month of December to the Executive Committee of the Pennsylvania State Agricultural Society all such reports or returns as they are required to demand and receive from applicants for premiums, together with an abstract of their proceedings during the year.

FREDERICK WATTS,
President.

What will Pennsylvania Farmers do for the Journal?

It will no doubt afford the sincere friends of Agriculture in Pennsylvania, some gratification to know, that our subscription list has gone on steadily increasing, until our circulation is sufficiently large to justify us in asserting that the Farm Journal is now placed upon a basis which certainly secures its continuance. For this wished for result, we are indebted mainly, to the kind friends who have given their time and talents to the good work, and to them our warmest thanks are due.

But while we thus *individually* express our gratification and tender our thanks, we would not have the Farm Journal regarded as an *individual* enterprise. Any losses, it is true, which might be sustained by it, would fall upon us, while at the same time we should receive the profits, if any; but we are desirous of awakening a more general feeling of interest in its favor. With an honest, heartfelt desire to give our farmers a chance to be heard through a Journal of their own—a Journal representing truly, the character of Pennsylvania Agriculture, and sustaining its interests—we commenced its publication, relying upon those whose reputation we desired to maintain and whose interests we had resolved to support, for the assistance necessary to sustain our enterprise. Many predicted failure—we never thought of it. A few encouraged us, and we went on with a confident spirit. We felt satisfied that the claims of the Farm Journal would one day be acknowledged, and that State pride would not permit it to die for want of support. Nor were we deceived in our opinion. A liberal support has already been extended it, and the reproach that Pennsylvania would not encourage an Agricultural Journal of her own has been wiped away.

We have said, that our circulation is sufficiently large to secure the permanency of the Journal; but it is not large enough to enable us to render it what it should be. Our esteemed neighbor of the Ohio Cultivator asks, and asks confidently too, for *ten thousand* subscribers, and our impression is, that he will get them. The circulation of the Albany Cultivator is now *fifteen thousand*, and that of the Genesee

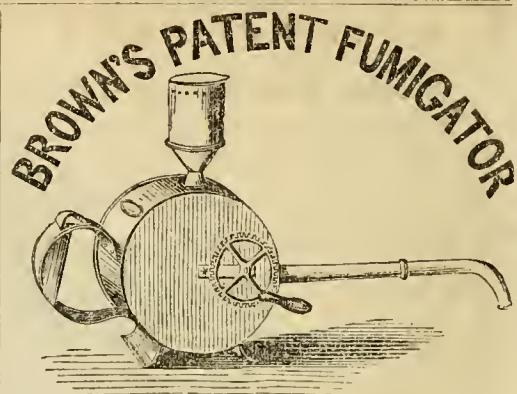
Farmer, is, we presume, still greater. Remember! these are not the only Agricultural papers published in Ohio and New York. There are more than a dozen others of excellent character, nearly all of which are in a flourishing condition.

The Farm Journal, is the only strictly Agricultural Periodical published in our State, and may we not ask that Pennsylvania will extend to it, a support as liberal as that extended to the Ohio or Albany Cultivator? How easily this might be accomplished. A few hours effort on the part of our present subscribers would do it, and with such a patronage, what a noble and useful work we could offer.—Friends of Agriculture is it not worth the effort?—Is it not worth an hour or two's labor, to be able to say, that Pennsylvania sustains her Agricultural Journal as liberally as New York or Ohio, sustain theirs? And why should she not? As a State she ranks first in Agricultural and Mineral wealth—her farmers are acknowledged superior to those of other States, while her population is second to New York only. With such resources, such a character, and such a population, why should we not have ten or fifteen thousand subscribers? Shall we have them? Shall we enter upon the year 1852 with the pleasing consciousness that our sphere of usefulness is largely increased—that our Journal is diffusing more widely, its valuable Agricultural truths, and that it is awaking the farmers of our good old Commonwealth to the advantages which science offers.

Friends—those who have stood by us so faithfully, we ask another effort. It will not cost much, and if you succeed in doubling our present list, with what more pleasing thoughts would you desire to begin the New Year, than that you have aided in building up the agricultural reputation and interests of Pennsylvania. January is the month in which subscriptions to monthly periodicals are generally commenced, so that now is the time for successful action.

NOTICES OF THE NEWSPAPER PRESS.—We would be doing violence to our own feelings, as well as gross injustice to our contemporaries of the newspaper press throughout the State, did we not acknowledge our heavy indebtedness to them for the many kind notices given the Farm Journal. Although our limits will not enable us to reciprocate these valuable favors, it may be a source of satisfaction to our editorial brethren to know, that they have been largely instrumental in bringing our Journal before the public, and in doing this, have, we trust, aided in awaking a deeper interest in the cause of agriculture. Our earnest and heartfelt thanks must therefore be received as pay, having nothing better to offer.

The attention of the Presidents of the different County Societies is asked to the notice of the Hon. Frederick Watts, President of the State Agricultural Society.



We give above, an accurate representation of a highly valuable portable instrument, designed for fumigating Green Houses, Frames, Dwellings, Ships, Closets and Wardrobes; also Shrubs, Roses and outdoor plants, in the open air without the slightest injury to those of the most delicate character. Its use and value will be understood from the following:

"The instrument is available for fumigating Apiaries, or houses and ships during the prevalence of Cholera, or other epidemic Diseases, or when infested by insects; with it, also, Rooms and Closets may be scented by burning Lavender or other aromatic Herbs. The Instrument is of most easy application, the substance to be used for fumigation being placed in the magazine at top and ignited with a match or paper, in precisely the same manner as an ordinary smoking pipe; it is so light that it can be carried about and used by a Lady without inconvenience. All that is necessary is to introduce the nozzle into an aperture in the door or glass of a Green-house, and by turning the handle it will soon be filled with smoke; nor is the Machine less effective in the open air, for the smoke being concentrated to a point, and made to issue in any required direction, the whole force of the Instrument can be brought to bear on any particular affected part. A great deal of Tobacco may be saved by placing the Plant under a paper tent sheet, or some other temporary covering, during the operation."—It is manufactured and sold by R. Buist, Seedsman of Philadelphia.

TO KNOW WILD DUCKS.—The claws in the *wild* species of Duck are *black*.

HOVER'S INK MANUFACTORY

Removed to No. 114 RACE STREET, between Fourth and Fifth, and opposite Crown st., PHILADELPHIA, where the proprietor is enabled, by increased facilities, to supply the growing demand for HOVER'S INK, which its wide-spread reputation has created.

This Ink is so well established in the good opinion and confidence of the American public, that it is scarcely necessary to say anything in its favor, and the manufacturer takes this opportunity to say that the confidence thus secured, shall not be abused.

In addition to the various kinds of Writing Ink, he also manufactures ADAMANTINE CEMENT, for mending Glass and China, as well as a superior HAIR DYE; a trial only is necessary to insure its future use, and a sealing wax well adapted for Druggists and Bottlers, at a very low price, in large or small quantities.

Orders addressed to JOSEPH E. HOVER, Manufacturer, No. 114 Race street, between 4th and 5th, opposite Crown st., Phila.

IMPORTANT TO FARMERS.

JESSE ROBERT'S PATENT UNITED STATES
GRAIN AND SEED FAN.TO WHICH WAS AWARDED THE
FIRST PREMIUM

At the Pennsylvania Agricultural Fair, after a trial the fairness of which could not be disputed. These Fans, the inventor confidently asserts, are the only ones now in use entirely adequate to the wants of the farmer. The object of the inventor was not directed alone, to the purpose of cleaning grain, but of cleaning it and saving at the same time the farmer the trouble of gathering it from the dust on the floor. In addition to this, these Fans, possess great advantages than those constructed upon the old plan.— These advantages are as follows:

First. The arrangement is such that a quick shake can be obtained by turning slowly, thus securing when desired, a less quantity of for small seeds.

Second. When necessary a slow shake can be secured, by rapid turning. This is of immense advantage, as it adapts the fan, to the cleaning of all kinds of seeds.

Third. A new method of adjusting the riddles and screws. This gives the operator the advantage of placing them in any position best adapted to accomplish the purposes of a grain Fan. Every riddle and screen has a separate adjustment, so that each one can be fixed at any angle without the necessity of taking them out.

Fourth. The grain, instead of falling on the floor, as is usually the case, is discharged, by means of a small trough, into the half bushel, or other measure that may be placed under it. By this arrangement the grain is all measured, by the time it is cleaned, thus saving not only labor, but time, and consequently expense, as well as keeping the grain from contact with the dust and dirt on floor. For this reason; the fan, can be put in operation anywhere, with as little trouble as the common fans can be used in a barn floor.

Fifth. The simplicity of their constructions renders them less liable to get out of repair than other mills.

For the above reasons, we confidently recommend our Fans to public patronage. Privileges to manufacture will be granted on reasonable terms. Satisfactory information can be promptly had by addressing *post paid*, the subscriber at Norristown, Montgomery co., Pa.

JESSE ROBERTS.

Norristown, December 1, 1851.

9-1f.

NEW HARDY CLIMBER,
CALYSTEGIA PUBESCENT.

This new and beautiful climber, recently introduced from China by Mr. Fortune, proves perfectly hardy in New England, having stood in the grounds here two winters without protection. Trained to a single pillar, say ten feet in height, it is very striking and beautiful object from June till cold weather, during which time it is covered with a profusion of its large double flowers of a delicate rose color. It is very ornamental planted in patches like Verbena; makes an admirable screen; and is very effective in young plantations, belts or shrubberies, trailing prettily on the surface, and running among the lower branches of the trees in a very picturesque manner. Its culture is very simple, and it will thrive in common garden soil. If required in considerable quantities the tubers may be divided into single eyes, planting each in a four inch pot of good light compost, in February, under glass, or in hot beds in the spring; or larger pieces containing several eyes may be planted in the open ground in May. Plants \$2 per dozen. Tubers for 100 plants \$3, which may be sent by mail or express, to order.

Also, every description of Fruit and Ornamental TREES and SHRUBS; Strawberries, Dahlias, Roses, Verbenas, Fuchsias, Chrysanthemums, &c., including every new variety of the present season.

Stocks for Nurseries and amateurs, both fruit and ornamental of every description. Pear Seed of first rate quality.

Address B. M. WATSON, Plymouth, Mass.
Carriage paid to Boston.
Catalogues sent post-paid on application.

FRUIT AND ORNAMENTAL TREES FOR
SALE

At the Fair-View Nurseries Moorestown, Burlington Co., N. J.—50,000 Apple Trees, from 8 to 10 and 12 feet high, embracing about 150 Select Varieties, ripening in succession from the earliest to the latest. Also, a large quantity of Peach, Cherry, Pear, Plum, Apricot, Nectarine, Almonds, Quince, Grape Vines, etc. The Fruit Trees have principally been worked from standard trees, which leaves but little room to doubt as to the correctness of the Fruit, which has taken the premium at the Pennsylvania Horticultural Society and others for the last ten years.

50,000 Deciduous and Evergreen Ornamental Trees and Shrubs, such as Sugar and Silver Maples, American and European Mountain Ash, Lindens, Horse-Chesnuts, American Larch, of a large size, suitable for road and street planting; Balm, Gileads, Norway Firs, Arborvitae, Pines of different varieties, Junipers, English and Irish Yew, Cedars of Lebanon, Double and Single Speciea, suitable for Cemeteries, Lawns and Private Yards; Burders, etc.

A liberal Discount will be allowed to persons who buy to sell again. Descriptive Catalogues furnished gratis to post-paid applicants.

JOHN PERKINS, Proprietor.

TO INVENTORS AND PATENTEES.

J. DENNIS, Jr., Practical Machinist, Manufacturer, and Draughtsman, having had twenty years' experience in building and operating machinery for manufacturing Cotton, Silk, Wool, Steam Engines, Printing Calico, &c., with several years' experience in procuring patents, tender his services to inventors to make examinations of their inventions from a rough sketch or drawing and limited description, (which may be forwarded by mail,) and compare them with the inventions in the Patent Office and give an opinion, whether the invention is patentable or not, for a fee of \$3; and save the inventor the expense of applying for a patent, which usually costs \$30, exclusive of the cost of model, as only about two-fifths of the patents applied for are granted.— His experience in making drawings of, and building and operating machinery, enables him to understand an invention from a rough drawing and limited description, and to comprehend the points in which the invention differs from those already patented, with the greatest facility. He also prepares drawings, specifications, covenants and assignments, or procures copies from, or attends to any business connected with the Patent Office. Counsellors in Patent cases can have an opinion by stating the points in their case, and arguments prepared with the proper authorities cited, to sustain the same, with depositions if necessary. He will also attend as Counsellor or Advocate in Patent causes in any Court.

Notice to 2,447 inventors whose applications were rejected in 1849 and '50, that he will examine their cases for \$3, to ascertain if the references will prevent obtaining a patent, if a proper claim is presented, and advise the applicant whether he had best withdraw or amend his papers, and get a reconsideration, or *Appeal*, or *File a Bill in Equity*. As he is the only attorney in this city, (Washington, D. C.,) who has succeeded in *reversing* the Commissioner's *decision* by an *Appeal* to the Chief Justice.

Office near the Patent Office, Washington, D. C. Letters, Sketches, and Drawings, sent by mail, (postage paid) containing fee, will be promptly attended to.

FRUIT & ORNAMENTAL TREES & SHRUB-
BERY.

The subscribers offer for sale at the Nursery and Garden a large and fine assortment of *Fruit and Ornamental Trees and Shrubbery*, embracing many new and valuable varieties in each department, which they can supply in large or small quantities, viz.—Apples, Pears, Peaches, Plums, Cherries, Apricots, Nectarines, Figs, Filberts, French and Spanish Chestnuts, English and other Gooseberries, Currants, Raspberries and Strawberries in variety; English Walnuts, Quinces, Aspargus roots, Osage Orange for hedging, Cranberries, &c., also Evergreen and Deciduous Trees & Shrubs, of native and foreign growth, many of them of recent introduction from abroad, such as Deodar cedars, Cedar of Lebanon, New Japan Cedar, Himalayan Spruce, Chil Pine, New Junipers, several varieties of Yew, &c., &c. Honeysuckle Vines and other creepers, Dwarf Pears on Quince, of fine size and quality, for immediate bearing, Cherries on Mahaleb, also *Hardy Perpetual Roses*, a large assortment; *Verbena*, *Dahlia*, *Phloxes*, *Chrysanthemums*. Bulbous roots, assorted, *Tulips*, *Hyacinths*, double and single *Grapes*, *Vines*, *Box* Edging and Green House Plants.

Trees and Plants delivered in Philadelphia, carefully packed free of charge, and despatched thence by public conveyance to any part of the Union. Orders by mail carefully attended to; catalogues furnished gratis, or may be obtained of A. M. Spangler, publisher of *Farm Journal*, in Lancaster, who will receive orders.

At our Agricultural and Horticultural Warehouse, we can also supply all kinds of improved Agricultural and Horticultural implements, also Field, Garden and Flower seeds, fresh and genuine—Country Storekeepers supplied at reduced prices with seeds, neatly put up in papers for retail sales.

PASCHALL MORRIS, & CO.
West Chester, Pa.

Seed and Agricultural Warehouse.

No. 29. Market Street, Phila.

WHERE the subscriber has opened an extensive assortment of *GRASS AND GARDEN SEEDS*, of his own raising, or recent importation, and warranted to be as represented.

He is, also, manufacturing all the most approved Agricultural Implements, among which he would call the attention of Farmers to a new article of *Plow*, of his own invention, called *Cast Steel, Extending Point, Self-Sharpening, Surface and Subsoil Plows*, which for durability and easy of draft is yet unequalled.

The great advantages these *Plows* possess over all others, are their peculiar construction and the substitution of *Cast Steel* in the place of *Cast-Iron*, which only wants to be seen to be appreciated; all of which will be sold on the most reasonable prices by

May, 1851.

C. B. ROGERS.

STRAWBERRY PLANTS.

THE subscriber offers for sale 4000 young and thrifty Strawberry plants at low prices. This and the following month being the proper time to form new beds to bear fruit the following year.

J. F. HEINTSH

Aug. 1, 1851.

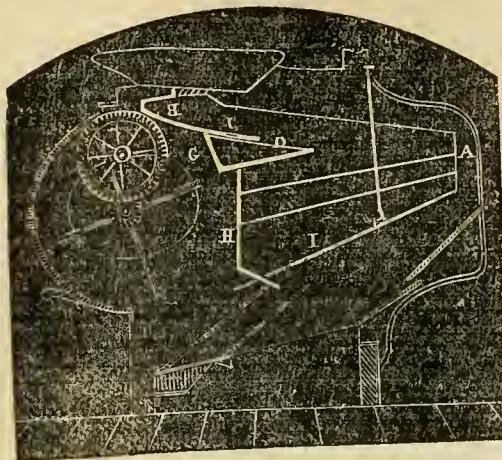
No. 18, East King st., North side, Lan.

GUANO,

PERUVIAN and Patagonia Guano for sale in lots to suit purchasers, by

J. CASSEDY & SON.

No. 121, South Water st., a few doors above Dock st., Phila.



MONTGOMERY'S UNRIVALLED IMPROVED ROCKAWAY SCREENER.

This celebrated FAN has been thoroughly tested and found to exceed all others now in use for cleaning the different kinds of grain.

This improvement by Montgomery & Brother, consists in a double shoe—the larger shoe—A as commonly attached to winnowing machines, having grooves into which the screens, sieves or sieve boards are slid and fast.

B. The curved apron upon which the grain falls after passing through a hopper above.

C. The door which is made to extend across the curved apron B, and opening back on hinges towards the front end of shoe A, rests flat upon the front part of the apron B. The grain passes along the curved apron B and through the aperture of the door C and falls upon the screen D underneath. The apron is carried over the screen D on to the screen underneath, whilst the screenings pass through the screen D into the shoe G underneath, and are carried along the bottom of the shoe G to the centre, where a spout H receives the screenings and carries them down behind into a box below the bottom of the shoe A. The grain is carried back on to the grain board underneath perfectly screened.

The persons who have already used these GRAIN FANS have not only spoken in flattering terms of them, but prefer them to all others they have used—and very many of the best Agriculturists have given their certificates that the fact of these machines screening the grain twice by one and the same operation is the very improvement they have long desired. Our farmers will now have the most perfect winnowing machine, which spreads the grain over the upper screen more perfectly than any others now in use. This improvement is so valuable as to have induced the inventors and manufacturers to make application for Letters Patent.

All orders for the machines will be promptly attended to by the undersigned.

J. MONTGOMERY & BROTHER,
Lancaster city, Pa.

Sept 1851.

THE FRUIT-GROWER'S HAND-BOOK.

Encouraged by the very warm commendations of this work, received alike from experienced Horticulturists and from the wholly inexperienced, the author ventures with some confidence to submit it to the public at large.

Notes of all the important questions on fruit culture asked of the writer during the last ten years, with a thorough research of hermological works, have contributed to render this volume as complete as possible, in convenient compass.

To the lot-holder who wishes to make the most of a few plants and little room, as well as to the extensive planter who wishes to arrange and cultivate his gardens in the most economical and profitable manner, the Hand Book will be found a useful companion for frequent reference.

Price, FIFTY CENTS. Two copies, post free, for \$1.

Address, WM. G. WARING,
Boalsburg, Centre co., Pa.

Sept. 1851.

DOUBLE-ACTING, LIFT AND FORCE PUMPS

The subscriber manufactures Double-acting Lift and Force Pumps, of all sizes, for Factories, Mines, Railway Water Stations, Breweries, Steamboats, Steamships, Tan Works, Ships, Water Boats, Hot Liquids, Family Purposes, &c.

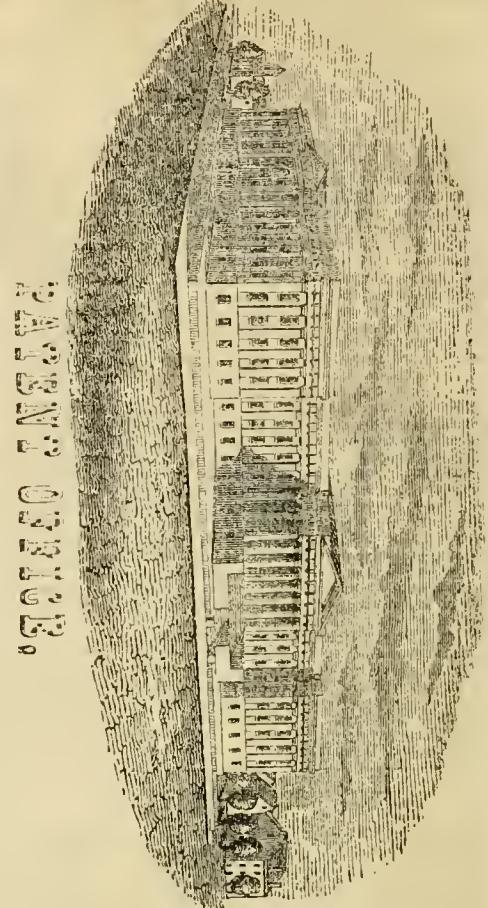
VILLAGE AND FACTORY FIRE ENGINES.

Garden Engines, Cistern Pumps, Well Pumps, for any depth required, Hose Couplings, Copper Riveted Hose of all sizes, Ornamental Cast-Iron Fountains, &c.

Purchasers are respectfully invited to call.

Any communications by mail will have immediate attention.

G. B. FARNSWORTH, 31 Cliff st., near Fulton, N. Y.



PENNA. PATENT AGENCY OFFICE.

Inventors and others, having business to transact at the United States Patent office, are hereby informed, that the undersigned will attend promptly to all business connected with said office, and will complete Perspective and Sectional Drawings, and all requisite papers, Caveats, Specifications, Disclaimers, Assignments, &c. and make the proper applications for the securing of Letters Patent, according to law.

MACHINISTS AND INVENTORS

will save time, trouble and expense, by first consulting him, and the strictest secrecy will be observed, relative to their inventions and claims.

The office is at present located in Centre Square, two doors south of the Lancaster Bank, where the list of patents granted since the year 1790 to the present day can be examined, together with numerous specifications, drawings and models, and every information obtained relative to the laws and rules of the U. S. Patent office.

All the requisite papers, drawings and models will be promptly and carefully forwarded to Washington city, free of charge by

J. FRANKLIN REIGART, Lancaster, Pa.

Life Insurance for Horses, &c.

THE American Live Stock Insurance Company, (Stockholders Individually Liable) for the Insurance of Horses, Mules, Prize Bulls, Sheep, Cattle, &c. against Fire, Water, Accidents and Disease. Also, upon Stock driven to Eastern markets, or transported South.

JOHN H. FRICK,
General Agent for Pennsylvania, Philadelphia.

REFERENCES:

Wood, Abbott & Co.,
Truitt, Brother & Co.,
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Philadelphia.

A g e n t s :

JOHN ZIMMERMAN, Lancaster Pa.

CHARLES F. FRICK, Reading, Pa.

SAMUEL H. TAYLOR, Mauch Chunk, Pa.

Dr. JOHN G. SCOVEN, Veterinary Surgeon,
Examiner for Lancaster County.

May, 1851.)

W. B. WILEY, Job Printer, Lancaster, Pa.

FARMERS PROTECT YOUR HOUSES & BARNs.

So many accidents have happened from lightning during the past summer, that every prudent and careful farmer should at once adopt such means as will be most effectual in preventing them—When it is remembered that certain safety may be secured at a very trifling expense, it becomes the duty of every farmer and good citizen to avail himself the proffered means. By so doing, he not only secures his property from fire by lightning, but protects also his family and those around him. These are important considerations and should have great weight. Those who desire a Lightning Rod, pronounced by the first Scientific men in our country, the very best in use, will find it on application to THOS. ARMITAGE, at his *Magnetic Lightning Rod* Factory, Vine Street, 3 doors above 12th, Philadelphia. These Rods are finished with all the improvements at nearly the same prices as the old kind. (1).

PAGE'S CIRCULAR SAW MILLS.

GEORGE PAGE & CO.

Shroeder street, between Baltimore and Fayette sts.,
Baltimore.

Manufacture to order, *Page's celebrated Portable Patent Circular Saw Mills*, with horse or steam power, of several sizes. They also manufacture Sawing and Planing Machines for railroad work, Thrashing Machines, GRIST MILLS for farm purposes, Corn and Cob Crushers, Tenoning Machines, SEED and CORN PLANTERS, IMPROVED HORSE POWERS, CORN SHELLERS, Angers for boring wells, angers for boring fence posts, water wheels, forcing pumps, &c.

They respectfully solicit a share of public patronage, and would be permitted to remark, that their Circular Saw Mill can do more work—say, twice as much work as any other mill with the same amount of power, and do it better.

(sept-9)

PHILADELPHIA & LIVERPOOL LINE OF PACKETS—To sail from Philadelphia on the 15th, and from Liverpool on the 1st of each month

From Phila. From Liverpool

Ship SHENANDOAH	April 15th	June 1st
Capt. W. F. Gardiner.	Aug. 15th	Oct. 1st
	Dec. 15th	Feb. 1st
New ship WESTMORELAND	May, 15th	July 1st
Capt. P. A. Decan,	Sept. 15th	Nov. 1st
	Jan. 15th	Mar. 1st
New ship SHACKNAXON,	June 15th	Aug. 1st
Capt. W. H. West.	Oct. 15th	Dec. 1st
	Feb. 15th	April 1st
Ship MARY PLEASANTS,	July 15th	Sept. 1st
Capt. R. R. Decan,	Nov. 15th	Jan. 1st
	March 15th	May 1st

The above first class ships are built of the best materials, and commanded by experienced navigators. Due regard has been paid to select models for speed with comfort for passengers. They will sail punctually on the days advertised, taking advantage of the steam tow boats on the Delaware.

Persons wishing to engage passage for their friends, can obtain certificates, which will be good for twelve months.

Passage to Liverpool in the cabin,	\$80
" " Forward cabin,	20
" " Steerage,	12
Passage from Liverpool in the cabin,	100
" " Forward cabin,	25
" " Steerage,	20

Those who wish to remit money, can be accommodated with drafts for £1 sterling and upwards, at sight, without discount. Apply to GEO. McHENRY & CO.

June 1, 1851. 37 Walnut street.

R. BUIST.

NURSERYMAN & SEED GROWER,

HAS always on hand at his seed Store, 97, Chestnut Street, Philadelphia, a large stock of Seeds of his own growth, a very important item to purchasers, as he is a practical grower, and has been engaged in his profession over 30 years. His nursery ground is amply stocked with Fruit, Shade and Ornamental Trees, accurately named and properly cultivated. Every article sold at the lowest rates, and warranted to be as represented.

Seed Store, 97 Chestnut Street, Philadelphia. Nurseries and Seed Farm, Darby Road, two miles below Gray's Ferry.

June 1, 1851. R. BUIST.

HENRY L. TRIPLER.

(Successor to Joseph P. H. Coates.)

Dealer in Grass and Garden Seeds.
No. 49, Market Street, Philadelphia.

JOURNAL OF THE FRANKLIN INSTITUTE.
of the State of Pennsylvania, for the promotion of the
Mechanic Arts.

THE oldest Mechanical Periodical extant in America, is published on the first of each month in the City of Philadelphia. It has been regularly issued for upwards of twenty-five years, and is carefully edited by a committee of scientific gentlemen appointed for the purpose, by the Franklin Institute.

The deservedly high reputation, both at home and abroad, which this Journal has acquired and sustained, has given it a circulation and exchange list of the best character, which enables the Committee on Publications to make the best selections from Foreign Journals, and to give circulation to original communications on mechanical and scientific subjects, and notices of new inventions; notices of all the Patents issued at the Patent Office, Washington City, are published in the Journal, together with a large amount of information on Mechanics, Chemistry, and Civil Engineering, derived from the latest and best authorities.

This Journal is published on the first of each month, each number containing at least seventy-two pages, and forms two volumes of about 432 pages each, illustrated with engravings on copper and on wood of those subjects which require them.

The subscription price is Five Dollars per annum, payable on the completion of the sixth number; and it will be forwarded free of postage when five dollars are remitted to the Actuary (postage paid) in advance for one year's subscription.

Communications and letters on business must be directed to "the Actuary of the Franklin Institute, Philadelphia, Pennsylvania," the postage paid.

W. M. HAMILTON, Actuary, F. I.

August 1, 1851.

TO FARMERS, PLANTERS,

MARKET GARDENERS & OTHERS. PREPARED OR ARTIFICIAL
GUANO—Manufactured only by KENTISH & CO.
Depot No. 40, Peck Slip, New York.

THIS manure is so combined, that the Ammonia and other fertilizing gases are absorbed, fixed, and are given out to vegetation only as it requires them. No rot, mildew, worm, fly or other insect can approach it: an important consideration to farmers generally, but particularly in potato planting. It will be admirably adapted to the renovation, restoration and fertilizing of such lands as have been worn out.

It may be used broadcast, after the ground is ploughed, and then harrowed in with the seed. It is also valuable as a top dressing. Six acres per day can be thus manured in a day by one man.

It may be used with the greatest advantage on Corn, Potatoes, Wheat, Tobacco, Garden Vegetables, Rye, Oats, Green House Plants, Flowers, Vines, Wall Fruit, &c., and more than a thousand certificates from the most celebrated Farmers and Gardeners, can be shown, all testifying in the highest terms to its great value as a fertilizer. A pamphlet containing these certificates can be had, by applying to the manufacturers. THE PRICE IS ONLY ONE CENT PER POUND. It is put up in hbs. averaging 235 lbs., or in casks, from 1000, to 1400 lbs.

TERMS. Cash, or approved credit on delivery. Persons wishing to buy the article to sell again will be allowed a liberal commission. Address KENTISH & CO.

Aug. 1, 1851. No. 40, Peck Slip, New York.

AGENCY

for the purchase and sale of improved breed of
Animals.

STOCK Cattle of all the different breeds, sheep, swine, pony, &c., purchased to order, and carefully shipped to any part of the United States, for which a moderate commission will be charged. The following are now on the list, and for sale, viz:

Thoroughbred Short Horns and Grade Cattle.

do	do	Alderney	do	do
do	do	Ayrshire	do	do
do	do	Devons	do	do
do	do	South Down Sheep.	do	do
do	do	Oxfordshire	do	do
do	do	Leicester	do	do

Swine and Poultry of different breeds. All letters post paid will be promptly attended to. Address AARON CLEMENT, Cedar st., above 9th, Phila. August 1, 1851.

GUANO AND PLASTER.

THE subscribers offer for sale at the lowest market rates, 1000 Tons Dry Patagonia Guano, 500 " Government Peruvian Guano, 500 bbls. Ground Plaster.

The quality of the above is unsurpassed, and can be recommended with confidence to farmers and others in want of the articles. A liberal deduction made to Country Merchants.

ALLEN & NEEDLES.

No. 22 & 23, S. Wbarves, First Store above Chas. st., Phila. July 1.

74m—

BERKSHIRE PIGS and South Down Sheep of Pure Blood, for sale by JAS THORNTON, Jr., Byberry, Philadelphia Co. July 1-6m.

FRUIT & ORNAMENTAL TREES, &C.

The subscribers solicit the attention of Nurserymen, Orchardists and Amateurs, to their present large and fine stock of Nursery Articles:

STANDARD FRUIT TREES, for Orchards; thrifty, well grown, and handsome, of all the best varieties.

DWARF TREES, for Gardens. The largest stock in the country, and the most complete.

DWARF PEAR TREES. Our collection consists of well known leading varieties, and numbers more than 150,000 saleable trees — The superiority of these, being grown in the country, over imported trees is well known to every intelligent cultivator. Nothing, in fact, in this country, can equal our collection of Pear Trees — They can be had from one to four years growth, some of which are now covered with fruit.

DWARF APPLE TREES. We cultivate in large quantities the best and handsomest varieties of apples on Doncan and Paradise stocks for Dwarfs and Pyramids, and can furnish them in large quantities, from one to two years growth.

DWARF CHERRY TREES. All the leading varieties are cultivated on Mahogany stocks, extensively. We can furnish by the hundred and thousand, from one to two years growth.

CHERRY Currant, the largest variety known. Upwards of 1,000 plants on hand.

ENGLISH GOOSEBERRIES, all the best sorts.

LARGE FRUITED MONTHLY RASPBERRY, that gives a crop of fine fruit in the autumn.

STRAWBERRIES, all the best sorts.

ORNAMENTAL Shade Trees, of good size, for streets, parks, &c., large and well grown.

CHOICE TREES and SHRUBS, for lawns and pleasure grounds, including all the finest, new and rare articles recently introduced.

HARDY EVERGREEN TREES. Norway Spruce and Balsam Fir, of small size, in large quantities; and a moderate supply of large ones, besides nearly fifty new and rare Evergreens, including Deodar Cedar, Cedar of Lebanon, Chih Pine, Cryptomeria or Japan Cedar, Hinoki Spruce, &c. &c.

Roses, Peonies, a large and complete collection, including the finest varieties.

PALMES. A collection of upwards of sixty varieties, including thirty new varieties imported last spring.

DAHLIAS. Upwards of 100 select varieties, including the finest English prize flowers of 1819 and 1830.

The following Catalogues, giving full information as regards terms, prices, &c., will be sent gratis to all who apply by post paid letters or at the office.

1st, a General Descriptive Catalogue.

2d, a Wholesale Catalogue.

3d, a Catalogue of Select Green House Plants.

4th, a Special Catalogue of Dahlias and Bedding Plants, for 1851.

ELLWANGER & BARRY,
Mount Hope and Garden & Nurseries,
Sept. 1851.

Rochester, N. Y.

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PENNSYLVANIA FARM JOURNAL

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THE FARM JOURNAL.

S. S. HALDEMAN, Editor.

For the Farm Journal.

The Importance of Agricultural Education.

BY JOHN L. BLAKE, D. D.

What is agricultural education? The question is here propounded that a reply may be given. for the masses of the agricultural community do not seem to know what it is, although it has been a common topic of declamation in the annual agricultural addresses and orations for more than a score of years. Indeed more than half a century since, Washington inculcated the necessity of it. For a long succession of years, the zealous and talented Mr. Garnett, of Virginia, labored to promote it. No small part of the long life of the veteran Skinner, beginning his labors, in Maryland and ending them in the Keystone State, were consecrated to it. The ever to be lamented Judge Buel, of New York, devoted to it the best powers of his accomplished mind. If we look farther north and eastward for kindred labors, we shall find that the venerable Timothy Pickering, the companion of Washington, was as much distinguished for his efforts in the cause of agricultural education as he was in the science of government and the political history of his country. And the venerable John Lowell, of Boston, one of the most accomplished scholars of his time, spread an undying halo around rural literature and agricultural science. And the recently deceased Isaac Hill, of New Hampshire—first, an humble printer, then Senator in Congress; afterwards Governor of that State—spent the last ten years of his life, in advocating agricultural education, and the great interests of rural life, and yet the masses of our farmers seem at a loss to know what all this can mean; do not seem aware that farmers need education.

To us, the apathy and the want of apprehension on this subject, among the masses of our agriculturists is a paradox. We know not how to account for it.—

Both instinct and reason seem opposed to it. Interest too is opposed to this apathy; and, we might seemingly with as much success apply to our legislatures, for half a million of dollars to make balloons to go to the planet Jupiter, as to expend it in organizing our colleges and common schools for the purposes of agricultural education. Why is this? Is it because the multitudes of our farmers think it unnecessary; think that the being born on a farm is sufficient for the labors of agriculture; that with those being so born, there is as much of an instinct for these labors, as there is with the newly dropped calf or colt for finding the natural food yielded by its dam? So far are they from supposing that books and study are needful to the successful prosecution of these labors, that they imagine all may be learned in a comparatively short period of personal observation during the season of tillage. Is it not a fact, that we might suppose they think the merchant may at any moment forsake his ledger and his bank books, the blacksmith his anvil and bellows, the physician his saddle bags and his nostrums, the sailor his quadrant and his log book, the tailor his press board and shears, and the shoemaker his bristles and his lap stone, although so ignorant of tillage and agricultural implements and their use, as not to know whether a fanning mill is designed to drive away mosquitoes and flies, or for some other purpose, may forthwith, without the aid of study or books become first rate agriculturists?—No disrespect is intended to our agricultural brethren. Surely we feel none. For them we have great regard. Their unwearied devotion to manual labor is proverbial. Their habits of economy are worthy of universal imitation. And in natural intelligence they are below no class of men; for it is a well known truth, that most of our great men at the bar, in the pulpit, in the healing art, upon the bench, and in the legislative halls are from the ranks of rural life. Still in the particular we are discussing they are sadly deficient and blind to their own interests.

What then is agricultural education? Let us ask in turn what is medical education? What is legal

education? What is theological education? What is mercantile education? What is mechanical education? Most of our farmers, although in the common acceptation of language, illiterate, would have a pretty just apprehension of the answers to be given to these interrogatories. They might not indeed give written definitions to them of grammatical purity, but the substance of such definitions would be well understood by them. They well know, that a medical education embraces a knowledge of the numerous diseases to which we are subject, the gradual development and all the diversified types of these diseases: and, above all, the antidotes and remedies known to exist and constituting the mysteries of the healing art. They well know that a theological education embraces a familiar knowledge of ancient languages, particularly those in which our sacred books were originally written, with a history of ancient usages and customs, having relation to them, and with the well established and authorized interpretation to these books. They well know that a legal education embraces a thorough knowledge of the acknowledged principles of justice in the diversified ramifications of business and property, as understood by common usage, and as settled by our courts of jurisprudence. They well know that a mercantile education embraces a knowledge of trade in all its departments—the various kinds of merchandize—whence they are obtained—where they will be wanted—what is their present or prospective value—together with every fact connected with judicial and monetary operations, whether of interest or exchange. And they well know that a mechanical education embraces a knowledge of the raw materials requisite in the formation of any prescribed object; of the various tools necessary in producing such formation; and, especially of a familiar habit and experience in using them.

Are not our farmers familiar with all this? Do they not generally act with all requisite wisdom and shrewdness in regard to it? They surely do. If they have a son, designed to be a physician, do they simply furnish him with his saddle bags, his nostrums, and his poney, and send him direct from the plough, on missions for the curing of fevers, for performances in obstetrics and for the amputation of limbs? If they wish to make him a divine, do they send him direct from the plough to the pulpit with no preparation but a suit of black clothes? If they wish to make him a lawyer, do they send him immediately from the manure heap to the bar, with no preparation but a green bag and a quantum of impudence, the offspring of ignorance? Or, if they wish to make him a merchant do they not place him for a due period of time in a counting house of established reputation? Or, if they wish to make him a mechanic do they not place him as an apprentice for five, six or seven years, with an artist well skilled in his particular vocation? It is all so. This is as it should be. This is the way

to make young men respectable in their several professions, and to enable them to become eminent.—This is the secret why so many young men from rural districts become so distinguished in the learned professions, in merchandise, and in the mechanic arts.

It would seem that with such an array of facts before us, there would be no difficulty in telling the process for an agricultural education; and that farmers would be prompt in providing it for their sons who are to succeed their fathers in tilling the ground.—The soil like every material object is subject to change; like an animal form, from use it becomes enervated and unfit for its legitimate functions. Man from excessive or protracted labor and from want of due attention to the use of food, becomes feeble and sometimes sickly. What is then done? Why a physician is brought to his aid; regimen is prescribed for him, medicine is administered to him; and, if the case has not been too long neglected, the invalid is restored and he again is in a condition to perform the labors of life. Who does not know that the soil becomes enervated and sickly from long or injudicious use, much as a man may become bilious, feverish and consumptive? Else why is it that hundreds and thousands of farms once verdant, productive and lucrative, in the Atlantic sections of our country, have become sterile and worthless, and have been abandoned? And, why is it that in multitudes of cases, the crops are now not what they once were by half? There can but one answer be given. The exigency admits of no evasion. The sun shines with its enlivening influences upon it, as it has done from the time when the morning stars sang and shouted that all was perfect. The dews of heaven descend and refresh it with the regularity that they descended upon the ancient hills of Hermon and Zion. The rain, either in gentle showers or in copious torrents, has not failed any more to satisfy it, when parched and thirsty, now, in the nineteenth century, than when the Puritans were spreading themselves over New England, or William Penn and his followers were applying the ploughshare about the Delaware, the Schuylkill and the Susquehanna. The truth is, the soil has become sickly and needs medicine.

To apply the restorative process to the soil, there should be an agricultural physician—a chemist. He will tell at once how it can be done, as well as the regular practitioner in the healing art, can tell how to purify and replenish the blood, or to remove bile or fever from the human system. Agricultural education teaches the process for restoring a worn out soil; the best process of tillage; the best kinds of animals to remunerate the owner; the best rotation of crops to prevent exhaustion of the soil; the best implements in rural culture; and, indeed it teaches whatever is connected with the amelioration and profits of agricultural labor. Agriculture should as much be taught in all our schools as arithmetic, or grammar, or geography. Till this is done, every farmer must depend

wholly on agricultural books, agricultural journals, and on the improved modes of culture among his brethren and neighbors as made known in agricultural fairs, or by personal observation.

Essex county, N. J., Dec. 10th, 1851.

For the Farm Journal.

On change of Seed.

MR. EDITOR:—As you live in a county remarkable for its good cultivation, and especially for its crops of wheat, can you, from some of your well-informed farmers, get any satisfactory practical information as to the following points:

1st. Whether a frequent change of seed, is a correct and judicious proceeding, and whether, on good soil and under good cultivation, we may not sow the same seed on the same farm, so long as those two conditions continue. I am aware there is a prejudice in favor of frequent changes of seed, and I am also certain that I have suffered, from yielding to this prejudice. My observation, is decidedly against it, but my experience has not been sufficiently long to authorize me to be very decided and dogmatic.

About once in two or three years, the farmer, or some farmers, think it necessary to try the seed from the farm of some one else. It does not seem to be of much consequence, whether it comes from a neighboring place, or one at a distance, or from another State, or from another part of the world, the object seems to be the excitement and novelty of new seed, without regard to circumstances.

Is this prejudice and this action upon it, right? or is not one of those ill digested and unreflecting impulses, that act on men, sometimes nearly as strongly in serious matters, as in frivolous. It is very natural, in an art so precarious as agriculture, that men should be liable to the forming of hasty conclusions. A man finds that his crops are bad, that he raises less, than a neighbor. He does not like to charge himself, with this ill-fortune—as the result of his ignorance, or of his negligence—but prefers assuming, that his brother farmer has better luck, without admitting the possibility of better cultivation, or of more intelligence on the part of his neighbor.

Admitting this to be the state of feeling with many farmers, how are we to decide, that their action is proper, and worthy of being followed?

Let us consider what are the conditions, that make seed worth the sowing. In the first place, it should be perfectly ripe or matured, and then carefully preserved, so that it may not suffer the slightest deterioration, before being put into the ground to reproduce. It is a matter of common observation that imperfect, badly matured seed, will germinate, and sometimes produce healthy plants, but the chances are the other way, and the disposition, no matter how favorable the circumstances, is unquestionably to disease. As a practice, therefore, the sowing of unhealthy or im-

perfect grain, is a bad one and leads inevitably to a failure of the crop. There are very few seasons in which for reasons very difficult to get at, the wheat is not laid. Sometimes it is ascribed to Hessian fly, sometimes to the ground being too highly manured, and the stem being weakened by overgrowth; but throwing aside the causes which we can only conjecture, we have the important question to solve, whether grain from plants that have been laid, and which necessarily is an imperfect seed, is fit to be sown. It may, as we have said, germinate, but can we assure ourselves of a good crop or a healthy fruit. We believe every experienced agriculturist, has decided this point, and against the sowing of seed that is in the slightest degree imperfect. But much the larger portion of farmers reserve this bad grain without a question, and have we not in this practice an excellent reason for the failure of crops of which there is every year so much complaint, and does not this make necessary a change of seed, which under other circumstances, would be of little importance—a change derived directly from the bad, slovenly management of the farmer himself; and is it not from this source too, that much of the land in the country has become gradually unfitted for the raising of large crops of wheat, of which at one time the country could boast? In this way, we have the farmer playing into the hands of his own ruin.

The rule should be the same in sowing seed, as in breeding animals, none but the best and most perfect should be used for the reproduction of its kind, and we are convinced that if this rule were adhered to, there would be less necessity for this frequent change of seed, which is now considered almost essential.—We are perfectly aware of the greater nicety, care, attention and labor required, if we are to bring any practice in agriculture to much refinement, we know full well the devotions, the anxiety, as well as toil, that every farmer must give to his art, if he wishes to have eminent success in it, or desires to improve it. But it is the same with every occupation, both the soul and mind must engage in the work, or the individual and his pursuit, will be stationary. A man should do something more than like a chicken, merely scratch over the earth to collect his morning worm—he has, or should have, a purpose and a design higher than to gratify the mere animal wants of his nature.

On this seemingly insignificant point, of which we are speaking, depends vastly more than would be disclosed upon a superficial examination. It has moral as well as physical results. There is deep disappointment and mortification in a failure; there is waste of time, labor and land; there is perhaps an abandonment of the soil, a change of pursuit, or a change in the crop, and the mode of farming. All these may follow on the want of care, the want of observation, the want of reflection, and too hasty yield-

ing to the opinion of others, and to the forming of prejudice.

But we will suppose that the farmer has acceded to the supposed necessity of a change of seed, and has made his purchase; what is the evidence that it is better than his own? Does it look better, or does it weigh more, or has he gained any thing, but the simple change? Does he know the soil where it grew, the mode of cultivation by which it was raised? He cannot answer, perhaps, one of these questions; yet he has not hesitated to make a vague and uncertain experiment, under the impulse and influence of an opinion that has but a feeble foundation, and which has forced him into the strong tide of a bad custom, while the truth is, that it is his want of intelligence or industry that causes his inferiority as an agriculturist, and that he who sells him the grain is superior from greater care, zeal, labor and attention. It may be that the nature of the soil differs so much in the place where the seed is to be sown, from that whence it was selected, that the experiment can but be unfortunate. Yet this is not considered, nor is the equally important circumstance of climate, at all regarded; two elements, it might be supposed, of essential importance, in our decision. Two questions, would naturally come into every cautious farmer's mind, when on the point of executing what may be to him so serious a matter, as a change of seed. First, is the person from whom I intend to purchase, a worse or a better farmer than I am, and is his soil the same or different? Then he would also consider the climate, if it were at a distance from his own residence. But we have never known these questions to be asked, and whether the grain came from New York, Virginia, Europe or Egypt, seemed to be of little consequence, it was put in the ground upon hit or miss principle, and if it succeeded, he flattered himself that it was the result of judicious farming operations; and if it was unsuccessful, he did not disparage or blame himself, but vented his sensibilities on the seed or the season. Now, we are disposed to believe, that in no case will a good crop be made, excepting where the seed is of an inferior character, and brought from a soil and climate, not as well calculated for its development, as that into which it is to be transferred. For instance, let the golden drop, or some other of the celebrated wheats, be brought from the moist climate and cultivated soil of England, and sown here, in our hot and dry atmosphere, and under an inferior cultivation, would it not immediately deteriorate? It would be the same with grain brought from France. But the Mediterranean is an example of the opposite kind. When first brought to this country, it was by no means of a promising appearance, but a milder climate, and a better soil than that of its original home, has almost metamorphosed it into a grain of a fine quality. Is it possible then, to lay down any fixed rules, in this matter?—

We cannot venture to do it, and should like the expression of an opinion from some experienced and observing farmer. There is another point on which we should like to hear something. Is it a good or bad practice to re-sow the grain that you have just harvested? It has this objection, you cannot tell whether you are or are not putting in the ground, much bad or imperfect grain, whereas that of the year before has given some evidence of its vitality.—As these are points of importance, it would be doing a great favor to the agricultural community, if an expression of opinion were freely given.

A. L. ELWYN.

Philadelphia, Dec. 10, 1851.

For the Farm Journal.

Small potatoes vs. large potatoes for seed—The rot.

MR. EDITOR:—As the season for the selection of seed potatoes is past, and the generality of farmers have already made up their minds in regard to the kind of potatoes they intend using for seed next season, it will perhaps be useless for me to offer any suggestions to your readers in regard to the matter. However, as there may be a few, who would like to hear a suggestion, and try a small experiment, I will offer the one, and give them a chance to try the other.

Many years ago, I was induced to believe that in sowing or planting seeds, the best and most perfectly developed, were the kind to be used. Experience has satisfied me that my belief was correct. A number of experiments, with large and small potatoes for seed, always resulted largely in favor of the former. The difference in yield has been so great, that I would rather pay a dollar a bushel for large potatoes for seed, than take small ones as a gift, and my reasons are these: There is every ground for presuming that the largest potatoes are generally the most thoroughly ripened—that they have imbibed a larger proportion of the life of the plant, and are, consequently, better fitted to reproduce tubers of the same quality. Small potatoes, it is true, may sometimes be equally well ripened, but it is very evident, that they are products of the last remaining elements of life in the plant.

Again: Small potatoes are very frequently of second growth. It is well known to those who grow potatoes, that the first growth is always the most vigorous and decidedly the largest, so that the second or small potato growth, does not seem to possess, in as great degree, the re-productive properties requisite to the perfection of the plant as the first.

Again: The first growth of potatoes being the largest and most perfectly developed, and at the same time, fully matured, before the small ones can have an existence, I make it a point always to select my seed from those hills where no second growth has taken place. If any of your readers are curious

enough to make the examination, they will find that the second growth of potatoes almost invariably affects the first to such a degree as to cause them (the first) either to rot entirely, or partially. This is especially the case in wet seasons, and for this reason, I invariably select for seed the large first growth potatoes, believing that I thereby not only secure better crops, but insure myself perfectly against the rot, now the theme of so much learned discussion.

If any of your readers have a better theory, let them "trot it out." All that I ask is, that they will offer the result of a few experiments to test its value. I have tried mine, and found it to answer as well in practice as in theory.

ELTON.

For the Farm Journal.
Wheat Culture.

In the interior of Pennsylvania, from whence we date, wheat and corn may be said to be our staple productions. Of the cultivation of the former, being the more important, we propose to treat at present. Our soil is limestone, a tenacious red clay, highly impregnated with iron, and in many localities with an infusion of flint gravel. Wheat is usually put in land manured after an oats crop has been taken off, or upon a clover sod, plowed either before or after harvest. If the farmer desires to enrich his land by turning in a coat of clover, the work should always be done before harvest, and the reason for this is more important than obvious; for if plowed at this early stage of the season, the grass has had time to undergo the necessary fermentation, so that when the season arrives for stirring, it is in a better condition for mixing more intimately with the soil and diffusing its benefit more extensively to the growing grain; but if the plowing in of the grass be deferred to a later period, nearly approaching the time for sowing, the germination of the seed and the fermentation of the grass are going on at the same time, and these natural actions of both are wholly uncongenial with each other. The heat and sourness of fermentation certainly operates to prevent a healthful germination of the seed; and this we think is a most important period for the ultimate success of the crop; for we think it may be said, in perfect accordance with all experience, that no good crop ever resulted from an imperfect or unhealthy germination of seed. And here, in connection with this idea, it may be remarked, that the time for sowing should always be regulated by the condition of the ground, taking care that it should be neither too wet or too dry, but just in such a state of moisture as will ensure the most speedy and active germination and growth. Seed sown in ground too wet and cold has a tardy and sickly growth, while that put in ground too dry has no growth at all, until it gets moisture, and by this time, the seed is so injured by exposure, as rarely, if ever to produce a remunerating crop. Much discussion has

been had, and great difference of opinion exists with regard to late and early sowing; our experience teaches, that there is no better rule by which to govern the subject, than this:—Sow at any time before the first of September, when the ground is in good order. You thus give the plant an active, healthy growth, and a constitution which enables it to withstand the many vicissitudes of the fall and the approaching winter.

The mode of plowing the ground, and the implement with which it is done, is worthy of much more consideration than is usually given to it. There are very many erroneous notions extant among farmers on this subject. A clover sod upon our limestone land is of a very tough and tenacious character, and the plows in general use are calculated to make exceedingly bad work; for that which is called pretty plowing, when every land slice exhibits its exact shape and due proportion, in a mass as or even more solid than before it was turned up, is a wretched mode of accomplishing the object. If the work of plowing be thus done, there is much less difference which side of the sod be uppermost than is usually imagined. If we but reflect that the earth is a set of mouths and lungs that constantly feed upon the productions of the natural elements, and that air and light and heat are as essential to its profitable existence as they are to that of the animal; and that the object of plowing is to open these mouths and lungs instead of compacting it and making it impervious to light and heat and food, we cannot hesitate about the use of an implement that will attain that object in the highest degree. If the farmer will but look with the eye of a mechanic upon his plow, and find the relative position of its beam and land-side to be such that they are tending in different directions, he will perceive at once how much more power he is using than would be necessary, if his implement were a good one. But this is not the greatest objection, for one which we deem of higher importance, is the great pressure against the land-slice which is made by such a plow, giving it a solidity which can be only overcome by repeated harrowings. The centre-draught plow, which derives its name from its mechanical structure, is not obnoxious to these objections; while it requires much less power, must necessarily press more lightly upon the land slice, leaving it to fall into a pulverized state as it separates from the mould-board. Light is beginning to shine in upon this important operation, and it is to be hoped that farmers will study more the policy of doing *good*, rather than *pretty* work.

Wheat, with us, is now almost universally put in with a drill. It is sufficient to say in commendation of this mode that all the seed you use is actually planted and covered just at that depth which the exigencies of your soil and your own judgment dictate. The implement, if a good one, places this subject en-

tirely within your own control. But there is an other advantage, of which our experience enables us to speak, that of harrowing wheat in the spring as early as the condition of the ground will allow. We have practised this for several years with decided advantage, not only because of the benefit which the growing wheat derives from it, but of the admirable condition in which it puts the ground for the reception of the clover-seed which is usually sowed at this period. If the ground be harrowed, the clover-seed be then sowed, and a roller of considerable weight passed over the whole, it will be an extraordinary and unfavorable season if your stubble after harvest be not well set with clover.

But I must not drop the subject, even at the risk of being tedious, without some remark upon the subject of the four cornered harrow, which is in common use and which is a very inefficient implement for this, as it is for all other purposes. The harrow which we use, is composed of two parts, being connected in the middle by hinges, so that it may conform more perfectly to the inequalities of the ground, and having in each part sixteen teeth of the usual length and seven-eights of an inch square. It will be found that in the operation of harrowing wheat, the common harrow will do very little work; it will be required to go over the ground more than once to put it in the condition that a single stroke with a good implement would do. If a harrow-tooth be properly made, by hammering inch and a quarter square iron, without intense heating, down to seven-eighths of an inch square, you will find the smaller tooth to be stronger, stiffer, more durable, and of course as you may multiply the number, much more efficient than the large clumsy one which has had no other work upon it than that which was necessary to draw it to a point at a white heat. There need be no fear of disturbing the roots of the wheat by this operation. We use a heavy, sharp harrow with thirty two teeth, which produces no other effect than that which is entirely beneficial.

FRED'K. WATTS.

Carlisle, 15th December, 1851.

For the Farm Journal.

Select Good Seed, &c.

MR. EDITOR:—Having during the past summer and fall suffered somewhat in the products of my garden, by the selection of bad seed, it has occurred to me that a few hints thrown out to your readers, might serve to save them from the same unpleasant consequences. It is with seed precisely as it is with cattle. As the finest animals will almost invariably produce the best progeny, so will choice seeds produce the most thrifty plants. The only difficulty in the matter is to know where to procure the best. So many establishments for the raising and sale of garden seeds have been opened in every direction within the last few years, that there is no want of places where to purchase, and as a consequence of this ri-

valy in the business, many seeds that are wholly worthless, are sold to the unsuspecting. It was through one of these establishments that I received the seeds to which I referred above. Some would not vegetate at all, although the most careful attention was paid them, while others turned out to be any thing else than the labels on the packages represented them to be. To blame the person who sold the seed, for all these defects, might seem a little unfair, and yet I do not know where the blame should attach if not to him, unless it would be to my own want of judgment. Perhaps it was the latter, and therefore in order to guard against any such mishaps in future I have determined to purchase no seeds unless I am perfectly satisfied that the seedsman from whom I purchase them, is not only honest, but a competent judge of the article he is selling.

While on the subject of seeds, I will remark that too much care cannot be exercised in putting them into the ground. Some contend for deep covering, others for shallow. I prefer the latter for several reasons. Nature never plants but always sows, and than this good old mother of ours, there is no better gardener. Adopting therefore natural principles, I cannot but think that the proper depth for seed is, such a covering of earth as will enable the tender stem of the plant to reach the surface, and at the same time protect the germ from destruction by heat.

Another important matter in putting in seed, is the condition of the ground. I well remember how when I was a boy, we always waited until after a shower to plant our garden seeds, and I remember also, that although the soil had previously been well pulverized, by the time we were done, it was nearly the consistency of mortar, and as soon as the sun shone upon it, became a hard crust. Of course the young plant would have great difficulty in making its way through this crust, if it succeeded at all. My plan is, to sow my seeds in dry weather or when practicable, when there is a prospect of a shower.—By this I do not mean that the best time for sowing seed is, when the earth is very dry, but when the soil is in such a condition that it will readily pulverize, so that it can be brought in contact with the smallest seed. If the expected shower comes, so much the better, as it brings the earth still closer round the seeds and thus promotes early and vigorous germination. A little attention to the selection of seed, and the time and manner of putting them in the ground is vastly important.

E. L. F.

Lancaster, December, 1851.

For the Farm Journal.

Corn vs. Wheat.

MR. EDITOR:—Your correspondent A. L. H. in urging the “necessity of increasing the fertility of our soils,” mentions as one reason, the fact, that the completion of the various rail roads and canals, now in process of construction, will bring us into warm

competition with the farmers of Ohio, Indiana, and other Western States. It appeared to me, in reading A. L. H.'s truthful article, that he did not attach sufficient importance to that fact, as to me it seems to be one that should claim earnest and early attention.

The difference between the price of our best wheat growing lands, and lands of the same quality in the West is so great, that our market facilities are almost counterbalanced by it. An Indiana farmer assured me the other day, that wheat could be raised profitably, in that State, at fifty cents a bushel.—With us, wheat is not worth raising if it will not command a dollar, and even at that price, but little money is made. Now, if an Indiana farmer can raise wheat profitably at fifty cents per bushel less than the Lancaster county farmer, it leaves him fifty cents to pay the freight on that bushel of wheat to the Atlantic seaboard. Will that sum pay the freight? Now, perhaps, not; but so soon as the great Central Railroad is completed to Pittsburgh, (which will be, in less than a twelvemonth,) it certainly will.—When there is a continuous line of railroad from Philadelphia to the heart of the State of Indiana, wheat can be transported to the former place, at less than fifty or even thirty cents, and how will affairs then stand? It is very apparent that unless our farmers are prepared to grow wheat at less than eighty cents, they must turn their attention to something more profitable, unless, adopting A. L. H.'s suggestion, they set to work in good earnest and compensate for the decrease in price by the increase in yield.—If they can double their present crop, at the present outlay of labor and money, well and good, but if they cannot, wheat growing must be abandoned, at least, it cannot be continued as the staple crop of the limestone lands.

In reflecting upon this subject, it has occurred to me that corn, under any circumstances, is a more profitable crop than wheat. Of course forty bushels of corn to the acre will not pay as well as twenty-five or thirty bushels of wheat; but why should not our excellent land produce eighty or ninety bushels of corn as well as forty? There are farmers in Lancaster county whose yields of corn are rarely less in a favorable season than eighty bushels, and there is no good reason why every farmer upon the good lands should not realise as much.

I am not prepared to state the difference between the cost of cultivating an acre of corn and an acre of wheat, but I am satisfied, that it would not be as great as the difference in the value of the two crops. I have written the above, more with the hope of awaking attention to the subject, than with any desire to intrude my crude article upon your readers.

West Lampeter, Lancaster co.

E. H.

 See that your implements are in good order.

For the Farm Journal.

The Importance of Communicating Facts.

MR. EDITOR: Some time since in looking over my weekly papers, I came across an article which interested me very much, and in which the triumph of Science in Agriculture was so clearly shown, that I could not but feel how immensely important such knowledge must be to the practical farmer. I refer to the restoration, or renovation rather of the farm of Reverdy Johnson of Baltimore, which, when he purchased it was apparently so completely exhausted, as not to produce more than a single peck of corn to the acre, but by the application of a single ingredient ("biphosphate of lime") was made to yield twenty nine bushels to the acre, the first season after it was applied. The story at first appeared a little incredible, but when I observed that it was sustained by the very best authority, and that unerring science had proven the want of this particular ingredient only, to render the soil productive, my own common sense taught me that there was no mistake about it. Being a practical man myself, and having for many years stood opposed to any other than the "good old way," of farming, you will not be surprised at my indulging a doubt in regard to this experiment. I have always contended against the innovations of theorists and mere experimenters, honestly believing that they were doing serious mischief, not only to themselves but to thousands of others who were induced to adopt their suggestions. So deep rooted was my prejudice that I have never permitted an agricultural journal to come into my house, and there are thousands of others like me. But after reading that article I sat down to reflect upon it, and the more I thought about it, the more fully was I convinced of the fact that I had been standing in my own light. I began to have a little faith in "book farming," and for the first time in my life regretted that I had not expended a dollar or two each year for one or two good agricultural papers. If Reverdy Johnson's farm needed the application of but a single ingredient to redeem it from utter barrenness to a fair degree of fertility, might not some of my own land be in pretty nearly the same condition and would not the addition of perhaps a single fertilizing element enable me to largely increase my crops. I just then remembered that my crops had been lessening in quantity every year for the last five or six years, notwithstanding all my exertions to keep up to the average yield. This rather alarmed me. It never appeared half so serious before, and I resolved at once to inquire into the matter; but where to begin or how, I was at a loss to know. I would have paid any price to be enabled to tell what the constituents of my soil were, but that was out of the question, unless I could secure the services of some chemist, who would analyse it for me. And now Mr. Editor, having understood from a neighbor who takes your Journal, that

you propose having soils analysed, will you be kind enough to write to me, and inform me how I shall proceed, and at the same time, send me the Farm Journal, the subscription money for which you will find enclosed. I am determined henceforth, to know what science is doing for the farmer, and though I cannot hope to become a scientific farmer myself, I feel that I shall lose nothing by becoming familiar with what is going on in the agricultural world, while at the same time, my boys will have a chance of imbibing a taste for valuable agricultural reading.

Very Respectfully, A. H.

Franklin co. Dec. 8, 1851.

[We commend the above common sense letter to those of our readers who do not think it worth their while to communicate facts for the Journal. If the hoarded up experience and observation of our practical men were given to the public, what immense benefits would result. As A. H. remarks, "there are thousands of others like him!" and all that is necessary to root out their long cherished prejudices, is some striking fact presented to them in a form calculated to arrest their attention as in the case of A. H. himself.—ED.]

Translated for Farm Journal.

Agricultural Chemistry, No. 5.

Oxygen in combination with *sodium* forms *natron* or *soda*—which is a resulting product of the conversion of common salt into carbonate of soda. For this purpose common salt is treated with sulphuric acid in a reverberatory furnace, (fig. 14,) the salt be-

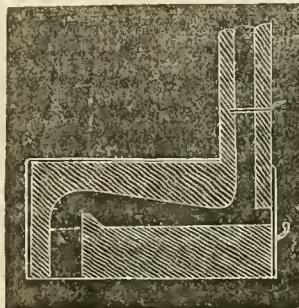


Fig. 14.

ing first spread evenly in the rear division of the furnace, and sulphuric acid being then poured thereon from above by means of a funnel. When the evolution of gas ceases, the dry mass is freed from its excess of sulphuric acid by heat, in the interior part of the furnace, and dry sulphate of soda remains.

Soda is never found in a pure state, but always in combination with an acid, for which it possesses great affinity. In such combinations it serves as a substantial aliment of plants. But animals likewise require soda, and hence they must regularly and frequently be supplied with salt, which is a combination of soda and chlorine. It is in consequence of the extensive consumption of salt by men and animals that soda is

almost every where found in the soil, and usually in quantities adequate to the wants of plants and cultivated crops. But where a deficiency of this ingredient of the soil becomes apparent, it can be supplied by a dressing of common coarse salt, sown broadcast. Of the various combinations of soda with acids, the sulphate of soda, or Glauber's salt, is interesting to the farmer as an excellent fertilizer or stimulant. It is obtained as a resulting product in the preparation of Salamoniae, and in the manufacture of muriatic acid from common salt. Sprengel says that numerous experiments resulted in demonstrating the value of sulphate of soda in promoting vegetable growth, especially when applied to the clovers and leguminous plants in general. Its efficacy, like that of gypsum, probably results from the sulphuric acid it contains. Owing to its great solubility in water, it can be applied safely only in small quantity; and it can only be ascertained by repeated trials, how much each particular kind of crop requires, or will bear, on a given area. The application of it to fruit trees, is also alleged to be highly beneficial in increasing their productiveness; though no reliable experiments have been published. Wherever this article can be procured at a low price, as in the immediate vicinity of chemical works, the farmer will find the judicious use of it advantageous.

Another very important, as well as frequent combination of oxygen, is that with *calcium*, producing *calcareous earth* or *lime*. In its pure state calcareous earth is a very caustic white powder, but it loses its causticity as soon as it combines with an acid. Calcareous earth is most commonly found in combination with carbonic acid, constituting common *limestone*, or with sulphuric acid, forming *gypsum*, or plaster of Paris—both of which contain a certain quantity of water in chemical combination. If this water and the carbonic acid be driven off from common limestone by means of fire, we obtain burnt lime—which, if left exposed to atmospheric air, will again absorb carbonic acid therefrom, after it has become slaked by imbibing moisture or water. In consequence of the action of the carbonic acid of the atmospheric or calcareous earth, traces of it are found in most soils, and spring water usually holds it in solution. whence results the fertilizing property of such water. This solubility of calcareous earth is a quality of great importance in agriculture, as many plants require large proportions of lime for their due development and growth; and it can readily be ascertained whether a soil contains much lime by placing a small quantity of it in a vial and pouring some dilute sulphuric acid thereon. If effervescence and disengagement of gas ensue, the presence of lime is certain. To supply the soil with calcareous earth, it is dressed with marl or caustic lime. The latter combines with the acids in sour soils, rendering those acids harmless by converting them into a neutral salt.

A combination of lime and sulphuric acid constitutes *sulphate of lime*, or *gypsum*. This possesses neither acid nor caustic properties, and does not appear to be soluble in water; though it is really slowly taken up by water, when present in sufficient quantity. Gypsum is decomposed by other substances which the soil contains, and its constituents serve as food for plants.—Thus the ammonia in the soil has a stronger affinity for sulphuric acid than the lime, and withdraws it therefrom, to form with it the highly fertilizing and very soluble *sulphate of ammonia*. The lime remains either uncombined or united with carbonic acid, and is thus absorbed in turn. By these and similar processes, plants are supplied with sulphur, nitrogen and lime, substances essentially requisite to their growth. On many kinds of soil gypsum is altogether inoperative, either because they already contain a sufficient supply, or because the substances indispensable to its solution and decomposition are not present. But by the application of manures containing carbon and ammonia, the more rapid decomposition of sulphate of lime may be effected. If gypsum contain a considerable proportion of common salt, it will prove the more valuable for agricultural purposes.

Nitrate of lime, also, is an excellent promoter of vegetation; but the artificial preparation of it would render it too expensive for use. It can, however, sometimes be obtained cheap, in the shape of lime rubbish from old buildings—the lime it contains having combined with saltpetre—and may then be beneficially applied to the soil. It is occasionally met with in marl, greatly enhancing the fertilizing qualities of that article. This effect is attributable mainly to the large proportion of nitrogen it contains; and it is transient chiefly because this salt is exceedingly soluble in water, and therefore easily leached out of the soil by rain. It has been alleged that after land has been marled, nitrate of lime is formed in the soil, and that this is the chief benefit derived from marling. But admitting that nitrate of lime is thus formed, the quantity produced cannot still be sufficiently great to justify us in attributing the chief value of marl thereto. In fact the meliorating qualities cannot be ascribed to any one of its constituents, to the exclusion of the rest.

Another combination is lime with phosphoric acid, or *phosphate of lime*. This is very valuable to the farmer as a means of introducing phosphoric acid to the soil: but as phosphate of lime is not readily soluble, the use of sulphuric acid in its application is to be recommended. This substance constitutes the principal part of the bones of men and animals. It is found in a crystallized state in the mineral called *apatite*; and uncrystallized in *phosphorite* and *moroxite*. Most kinds of marl contain it; and it is found in the ashes of most vegetables, especially of leguminous and cruciferous plants and cereal grains.

From a combination of lime with silicic acid, is

formed *silicate of lime*, a substance decomposable by almost any acid, and found in various minerals. As it is wholly insoluble in water, the soil may contain a large proportion of it, without any advantage to the growing crop derivable therefrom, till it is acted on by humic or other acid.

Furthermore, from the combination of oxygen with aluminum, *alumina* is produced—a substance by no means to be confounded with *clay*, which is an intimate combination of alumina with silicic acid, some calcareous earth, potash, soda, &c. Clay is produced by the gradual disintegration of stones and minerals, particularly of felspar. As alumina is not soluble in carbonic acid, it is rarely, and then only in very limited quantity, absorbed by plants, and is consequently not to be regarded as supplying them with aliment. On the contrary it possesses the property of preparing the soil itself for the reception of alimentary matters. Alumina is distinguished by the following characteristics:—1. It can imbibe a large quantity of water and thereby become plastic. When dried it hardens, contracts very much, and becomes fissured. 2. It is soluble neither in water nor in carbonic acid, but readily enters into combination with various other acids, then however acting injuriously on vegetation. Clay, on the other hand, not only imbibes carbonic acid readily, but also the oxygen of the atmosphere and ammonia—thus establishing its great importance in agriculture.

The combination of oxygen with magnesium forms *magnesia*. This substance frequently occurs combined with calcareous earth or silica, but more generally with carbonic acid. Almost all plants require some magnesia, and to a few it is altogether indispensable. But when magnesia predominates in the soil, its effects are invariably pernicious, as in all the cold soils. If a field be dressed with lime containing a very large proportion of magnesia, the ensuing crops are very likely to be injured, because the magnesia re-absorbs very slowly, from the atmosphere, the carbonic acid of which it has been deprived by heat. It consequently remains long in a condition to combine with any acid which the soil may contain: and the formation of humate of magnesia speedily ensues; which requiring but little water for its solution, supplies the growing plants with much more magnesia than they are able to assimilate. Pure magnesia alone could not injure plants so extensively, as it is soluble only in 5142 parts of water.

The combination of oxygen with iron, forms the *protoxyd* and the *peroxyd of iron*. The protoxyd of iron is produced when iron and oxygen combine while there is not enough of the latter present to produce entire saturation. The difference between the protoxyd and the peroxyd of iron consists in this, that the former is very soluble in water containing carbonic acid, whilst the latter is not. Hence the former becomes injurious when the soil contains it in

excess, whilst the latter continues inoperative, and consequently harmless. The injuriousness of the protoxyd of iron manifests itself very obviously there, for example, where the soil is plowed very deep at once. If a large quantity of the protoxyd of iron has been deposited on the bottom of the furrow by abrasion from the sole of the plow in previous years, this is now brought up at once and mixed with the surface soil. It is thus dissolved by the rain water which has absorbed the carbonic acid of the soil, and the plants are thus injured by an excessive supply of this substance, furnished by the water which holds it in solution. Such a soil does not again recover its former fertility, till the protoxyd has been converted into a peroxyd, by the gradual absorption of oxygen from the atmosphere. Hence, when a soil is found to contain too large a proportion of protoxyd of iron, the proper course is to plow it very frequently, that it may as speedily as possible, absorb from the atmosphere as much oxygen as is requisite for the conversion of the protoxyd of iron into peroxyd. A dressing of fresh burnt lime also renders excellent service in such cases, because the lime withdraws the excess of carbonic acid from the water, and thus diminishes its power^s of solution.

Again, oxyd of iron combines with acids. Thus protoxyd of iron unites with sulphuric acid, and forms *sulphate of iron*, which, if it occurs in excess in the soil, destroys vegetation, though by virtue of its sulphuric acid, it acts as a fertilizer, if the soil contain it in minute quantity only. The injury resulting from the presence of iron in excess, may be removed or modified by the application of calcareous earth, burnt lime, or ashes to the soil. The *phosphated protoxyd of iron* occurs abundantly in swampy or marshy soils, and in the deposits of old stagnant ponds. It may be recognised by the bluish color of the clay, when recently uncovered, which turns brown or rusty when exposed to the air for a season. This substance is insoluble in water, and is scarcely soluble in carbonic acid, but is readily taken up by ammonia; and in this combination may be advantageously applied to cultivated crops. But where it exists in excess, in this state, united with various other substances, which render it soluble, it may become injurious by its superabundance.

For the Farm Journal.

Apple Pumice--Compost--Removing Fences.

MR. EDITOR:—As you have stated that if the outlines are given, you will fill up the rest, I send you a few facts, which you can use or not, as in your judgment may seem best.

In the fall of 1848, I undertook the management of certain portions of my farm, and feeling somewhat interested in the progress which was making every where around me, I determined upon experimenting a little, and here are the results.

After cider-making, I had a large lot of pumice,

the disposal of which bothered me a little. I might, it is true, have done as I have seen hundreds of others do, haul it into a ditch by the road side, or cart it into the stream, but believing that it could be applied to a better purpose, I ordered it to be drawn on my wheat land. My foreman raised many objections to this, and my neighbors predicted failure.—But I went ahead, and the result was the finest crop of wheat I ever saw. It was decidedly better than where the lime and manure had been applied alone. [The quantity of pumice and the extent of surface to which it was applied should have been mentioned. ED.]

Having a considerable amount of ditching to do, I had the rich soil from the ditches mixed with an equal quantity of good short manure, and to this I added lime at the rate of five bushels to eight cart loads of the above mixture. In the fall and spring I had the whole mass worked over by means of spade and hoe, until it was thoroughly mixed. With this compost, I gave my corn a good top-dressing, and the result was, that wherever it was applied, I had an increase of at least ten bushels to the acre.

Weeds generally grow more readily along fences, than in the middle of the field. My plan to eradicate them, is to remove my fences every six years, and the advantages I claim for it, are these: First, it effectually destroys the briars, elder bushes, and other troublesome plants. In the second place, it enables me to repair my fences in a proper manner; and lastly, I find that the fine yields on that portion of the field formerly covered by the old fence, will fully pay the expense of removing it.*

A. R. BARTOLETT.

Elmira Farm, Montgomery co.

[* The plan of removing fences every six years will of course apply only to worm fence.—ED.]

For the Farm Journal,

Permanent value of lime as a fertilizer--Composts.

MR. EDITOR:—Some ten years since, my father was engaged in burning lime, for the purpose of liming some land on another farm. After applying the requisite quantity, we found that there were about sixty bushels remaining in the kiln. From a drain from the public road we collected about four loads of rich sandy loam. We mixed the sixty bushels of lime with the loam, in the fall, by putting alternate layers of each. In the spring, the mass was as mellow as an ash heap. The whole of the heap was then drawn upon an acre and a half of timothy sod, which had been previously plowed to a depth of eight inches, and carefully spread and harrowed it in. It was then put in corn, and although we did not measure the crop, I am satisfied that the yield of the acre and a half composted, was at the rate of a hundred bushels to the acre. The next year it was put in corn, and the yield was equal to that of the preceding year. We then put in wheat. The average of the whole field, of which the acre and a half was a

part, was forty bushels, and from the decided superiority of the part composted, I cannot but think the yield from it amounted to six or eight bushels more. We put it in wheat again the following year, the crop being fully equal to the last. We then sowed it in grass, (clover and timothy mixed,) and finer grass I never saw. The difference between the composted and non-composted part was plainly apparent. On the former it was lodged early in the season, and we had considerable difficulty in mowing it. It lay in grass for four years, until last spring, when we again plowed it down and put it in corn. The yield was so heavy that I had purposed measuring it, and reporting it to the State Agricultural Fair, but was prevented by a particular circumstance.

I mention these facts for the purpose of showing the permanent advantages of lime as a fertilizer, as the benefits derived from composting as above show. It is proper to state that at the time of applying the compost to the acre and a half, the other part of the field was heavily manured with barn-yard manure, and although the yield on it was large and fine, it did not equal that where the lime and loam was applied. I now consider it in such prime condition that I purpose putting it in corn next spring, without any additional fertilizer: but I shall enrich that part on which the farm-yard manure had been applied with a dressing of the same kind, reserving the acre and a half for the purpose of testing thoroughly the length of time that will elapse before it will require any additional fertilizer.

J. F. H.

Strasburg, Lancaster co., Dec. 14, 1851.

For the Farm Journal.

Keep your cattle comfortable.

MR. EDITOR:—There are many errors in farming which are the result, not of a want of disposition to correct them, but of a want of knowledge of the fact that they are errors. One prominent amongst them is, the poor shelter generally afforded to farm stock in winter. We often see cattle exposed to the biting blasts and chilling rains, even where the owner has all the conveniences and room for keeping them warm and comfortable. In this, as in many other particulars, the old system is retained, and cattle presumed to be capable of bearing any degree of exposure, without injury. Did those who thus inconsiderately treat their animals so cruelly, but understand as every farmer should, the advantages of affording to them not merely shelter, but comfortable shelter, we should soon hear different accounts of the character of our farm stock generally. Let them look at the jealous care of the English farmers in this particular, and when they have noted the superiority, generally, of their stock, let them compare them with the majority of ours, and the disparity between the two will be so great as to convince even the most skeptical, that the expense of warm shelter and generous food will always be repaid by the increased value of the cattle.

It is asserted by those who have investigated the subject, and I am satisfied of the truth of it, that the prevention of the escape of animal heat, is in a degree, a substitute for food; or in other words, the quantity of food required to keep up the proper degree of animal heat, where the animal is exposed to cold and chilling weather, would, if it were kept warmly sheltered, be converted into fat and muscle. On the score of economy, then, to say nothing of humanity to the poor cattle, whose only mode of complaint is their shivering and wasting forms, is it not well for the farmer to provide comfortable laces for his stock. I have tried it, and find myself largely the gainer, not only in the strength and fatness of my cattle, but in the satisfaction I feel in knowing that the creatures under my care are properly provided for.

E. LEVERING.

Chester co., Dec. 10, 1851.

For the Farm Journal.

Fattening Calves.

MR. EDITOR:—As the majority of calves are given to the butcher, it becomes a matter of considerable interest to the farmer to know how to put them in the best condition before handing them over to be slaughtered. Having tried various plans of feeding in order to secure this object with the least possible expense, I have at length found the following to be the most economical:

It is well known that during the first two weeks of a calf's life, its growth is mainly in the bones and muscles. To promote this growth as much as possible, is the object first to be attained. Milk being its natural food, the calf should of course have a portion of the quantity its dam yields. As all of my cows yield on an average from four to five gallons a day while fresh, I found that one third of that quantity mixed with the meal of beans, was as effectual in forming bone and muscle, as the whole of its dam's milk, or the quantity it would suck from her during the day and night.

As my calves are always sent to the butcher at four weeks old, at the close of the second week I change the food and instead of the bean meal, give them linseed meal mixed with milk, of which they readily partake, and fatten on it so rapidly that at the expiration of four weeks I have them in fine condition for market, and invariably get a better price, than when I gave them the unlimited use of their dam's milk and nothing else. It is proper to state that I never permit them to have much exercise, as I have found them much more difficult to fatten than when they have not a chance to range much.

I was induced to adopt this plan, from having seen somewhere, an article on feeding cattle, in which the muscle and fat-forming properties of different kinds of food were discussed, and the practical value of scientific knowledge to the farmer clearly shown.—

By this means I have seenred a snbstitute, which enables me to use the milk from my fresh cows several weeks earlier, while my calves are, I think, finer than before, and on calculating the expense, I find a considerable balance in favor of the substitute for the cow's milk.

E. T.

Dauphin county, December 2d, 1851.

For the Farm Journal.

Thorough Tillage.

MR. EDITOR:—One fact should ever be borne in mind by the husbandman, and that fact is, that there is something wanting beside manure, to secure remunerating crops. There are those who conceive it sufficient for all useful purposes, to stir their ground with the plow, to a depth of four or five inches—apply manure in such quantity as to them appears necessary, and leave the rest to Providence. Some go even farther than this, and one in particular, somewhere “away down east,” urges as an effectual remedy for the “potato rot” an abiding trust in Providence. Now this is all very well, and I cheerfully agree with the “down easter,” that our confidence in Providence should always be strong—that as He controls the wind and the storm, in Him should our faith be placed; but at the same time, while He has promised that there should always be a seed time and a harvest, He has also required that the *means* necessary to bring about these seasons should be used. The farmer therefore who does his work but half, and consequently fails of success, is grossly irreverent in attributing his failure, not to his own wretched system of tillage, but to the seasons and to Providence. I have said that there is something necessary to successful farming, besides manure, and that something is *thorough tillage*.

One of the great elements of fertilization in soils, is the perfect loosening of them, so that the different ingredients composing them, be thoroughly incorporated, and brought to the surface, and thus receive the advantages of exposure to the sun and atmosphere. None but a simpleton would pretend to doubt the value of manure, or assert the possibility of growing good crops for any length of time without it, but he is scarcely wiser who believes (and manifests his belief in his daily practice,) that his crops will be abundant where his tillage is meagre. Show me the husbandman whose plowing is shallow—whose breaking of the clods preparatory to seeding is imperfectly done—whose fields are straugers to the roller, and look very much as though the harrow or cultivator had never been used upon them, and I will show you poor yields—yields that will scarcely pay for the labor and expense, much less leave any profit behind. Why, is it not the simplest matter in the world to understand the advantage which a deep and well worked mellow soil possesses over a shallow, hard one? If there is any advantage at all to be gained by breaking

up the soil, will not the benefit be greatest, when the pulverization is most effectually done?

Why are our gardens more productive than our fields? Because we spade them twelve or fourteen inches deep, and so thoroughly break up the soil that we would be ashamed to have the beds show a lump the size of a hazle nut. Do garden seeds require more thorough tillage than wheat? Sow wheat in your garden, and your vegetables in your wheat fields—give the former the same attention usually given the latter, and let the result be your answer.—A more satisfactory argument in favor of thorough tillage will not be needed. When next you prepare your grounds for seeding, set apart half an acre, plow it nine inches instead of five, pulverize it well. Instead of permitting it to lie in large clods, use the harrow and roller till this is accomplished; give it of course, the same quantity of manure you give the other parts of the field, and watch the result. It will surprise you. There is no necessity for abating your confidence in Providence; but with the same trustful heart, that induced you to believe that He would give good crops with bad tillage, try the other plan, and if you are disappointed, it will then be time enough to condemn thorough tillage.

J. REDMOND.

York county, December 2d, 1851.

For the Farm Journal.

Cost of Fencing—Hedges—Stall Pasturing.

MR. EDITOR:—There is no heavier burthen resting upon the shoulders of the farmer than fencing. Having had a considerable quantity of fencing to put up within the last twelve months, my attention has been drawn more closely to the subject, and reflection has satisfied me of the fact that it is not only one of the most expensive items in farming, but that the day is coming when we shall be compelled to resort to some substitute for the present mode of fencing. It requires but a moment's thought to satisfy any person that our forests are rapidly disappearing, and with them, the materials for rails.

Frequent attempts to construct a durable fence with wire have been made, and I have read more than a dozen different articles giving directions for their construction. But wherever these directions have been followed, the result has been next thing to a failure. We of course should not despair of arriving at such knowledge on the subject as will enable us to construct a wire fence that will be as effectual as the present wooden ones, but that day may be distant and possibly never arrive.

Hedging has strong claims upon the farmers attention, and might unquestionably be made to answer the purpose fully. The only objection to the hedge is, that it requires too much attention to suit the inclinations and tastes of the generality of farmers.—Nothing beautifies a landscape more than fine hedges, but at the same time the labor and skill required

to keep them in order, are greater than would be given to them, and as a consequence we should soon have most unsightly affairs. With men of taste and perseverance they would succeed admirably, but with the careless farmer they would soon be worse than the wire fence. In many parts of Europe, we are told, that fencing has been wholly abandoned.—Where large flocks or herds are kept, herdsmen are employed to watch them, and it has been found that this system works admirably. Now if it is less expensive in Europe than the plan we are following, why not adopt it here? It may be answered that the great scarcity and consequent high price of fencing material, compelled the Europeans to this. Admit it, and we shall soon find, for the very same reasons, we shall sooner or later be compelled to follow in their footsteps. But as it will be wholly impracticable to induce our farmers to employ herdsmen now, I would suggest another plan, which my own experience justifies me in recommending, and which I know can be profitably adopted.

Instead of turning my cattle into pasture during the summer, I keep them in my cattle yard, where sheds have been erected to protect them from the heat of the sun, and the rain, &c. Twice a day, morning and evening, a sufficient amount of grass is cut and carried into a shed, from which it is divided out to the cattle. The advantages are two fold.—First, a saving of pasture, as I find that a little more than one half will answer the purpose, while the cattle are in just as fine condition as when permitted to run in the fields. Second, the manure is all kept together in the yard, and as I make it a point to have it all collected every morning and thrown under a shed erected for the purpose, I find immense advantage in this particular.

It appears to me that this plan might be adopted, and by means of it obviate the necessity of at least one half of the fencing now absolutely required upon our farms. The expense of cutting, carting and feeding the grass will be repaid by the smaller amount of pasture required, and the great advantage of having the manure during the hot months under shed, instead of being exposed to the wasting influences of sun, rain, &c. Besides this, the saving in the amount of fencing is a large item. Take for instance, a farm of one hundred acres, divided into fields of ten acres each. No other fencing would be needed than the dividing fence between neighbors. I have made a rough calculation of the amount saved upon a hundred acre farm divided as above, and find that it amounts, at \$1.25 per pannel, to the handsome sum of *eleven hundred and fifty dollars*. This supposes the fencing to be good post and rail. With this view of the ease and fully convinced that it is the best plan that can be adopted, I have determined never to renew the fencing on my farm. So soon as it needs repairs I will remove it entirely, thereby saving not

only in the particulars already enumerated, but also in the use of the land occupied by the fences, which is another item of importance.

If any of your correspondents can suggest a better plan, it is to be hoped they will do it, as the subject is one of much importance.

E. L. T.

For the Farm Journal.

MR. EDITOR:—I find in the Constitution of the State Agricultural Society, a clause making it the duty of the officers to furnish information in regard to the agricultural condition of their own district. In compliance with the above, I would say, that so far as our (the 13th) district is concerned, farming is in a prosperous condition. Our many large and commodious bank barns, and comfortable dwellings, all indicate comfort and abundance. Some portions of the district are too hilly and mountainous for farming, these portions however, are covered with fine timber and abound in minerals. Water power to any required extent may be had, so that the want of adaptation of these portions to agricultural purposes, is well compensated for in these other respects. I presume there are no better lands in Pennsylvania, than our river bottoms and valleys. They possess many great advantages, prominent among which is, the abundance of limestone of excellent quality, and convenient to almost every farm in the district. Coal is brought to us at such reasonable rates, that lime can be purchased at six cents per bushel, and much cheaper where it is burned in stacks on the ground. The latter plan is much practised here.

Our farmers use lime very liberally on their lands, the quantity per acre varying from fifty to four hundred bushels. The average quantity is about one hundred bushels.

One case in which 400 bushels were applied to the acre is deserving of mention. The field was sputty, and entirely too wet for cultivation. Under-draining was first resorted to, after which it was plowed as deep as a very large plow and four horses could do it. The lime was then put on at the above rate per acre, and with it ten four horse loads of stable manure additional. The result was, that this field which was worthless before, became as productive as any of our best river bottoms.

The same person applied 300 bushels per acre on a gravelly soil which previously yielded good crops.—The result in this case was just the reverse of the former. For six or eight years nothing would grow upon it. It is however, improving now, and will I presume ultimately realize the expectations of the owner. From this, it is very apparent that some soils will bear more lime than others, a fact with which every farmer should be familiar, as it enables him to make a judicious application of it and thus realize the best returns. Lime, stable manure and clover are the principal fertilizers in use in the district, although occasionally others are used on a limited scale.

The rotation of crops generally observed here is to plow stiff sod, plant corn, followed with oats, then manure and stubble. Wheat comes next in order, after which it is laid down in clover and permitted to remain one, two or three years for hay or pasture when it is again put in corn or wheat.

Comparatively few county societies have an existence in this district. Twelve years ago we had a flourishing agricultural society, which for some cause which I cannot explain, was permitted to languish and finally die. Since then there appears to exist a prejudice against such associations. Many of our farmers, however, having attended the State Fair, and being well pleased with their visit, I indulge the hope that the importance of associated effort will be more generally felt and appreciated. The only complaints I heard were in relation to the Railroad company's selling in one instance twice as many tickets as they could accommodate persons, and then refusing to refund the money to those who could not get into the cars. Another complaint was, the extravagant prices charged at Harrisburg. Our farmers did not expect to pay more than one dollar per day, but were charged much higher prices, and compelled to lay on the floor at that. My own impression is, that the Society should make an arrangement by which only one dollar a day should be charged. More than this is too much when wheat commands only 75 cents per bushel, and if this were the fixed price, and published by the Society, it would be the means of bringing many thousands more to the fair. The increased number in attendance would obviate, I think, the necessity of requiring money from the citizens of the place where it is to be held, while at the same time it would give much more general satisfaction.

JACOB GUNDY.

East Buffalo twp., Union co., Dec. 17, 1851.

[Although we cannot suppose that the clause in the constitution referred to by our correspondent, contemplated the publication of the reports in the Farm Journal, we hope that every officer will follow Mr. Gundy's example and enable us to present to our readers, the agricultural condition of the various sections of the State.

In relation to the charges of landlords at Harrisburg, our correspondent will bear in mind the fact that such occasions always require increased accommodations, and that provisions, such as poultry, butter, &c., are always higher in price. We should be glad to see such an arrangement made in regard to prices for boarding as that proposed by Mr. G. but we fear it would be impracticable.—ED.]

 Horse-hoeing is the operation of stirring the ground between rows of vegetables, by means of implements of the hoe, coulter, or pronged kind, drawn by horses.

For the Farm Journal.

A Letter from Venango County.

MR. EDITOR:—Our county is comparatively new, some parts of it quite so, but it is rapidly improving. Where, recently, the forest stood, fields of wheat now cover the ground. Where, but a few years ago, the wolf and bear prowled, smiling villages are now springing up, real estate is rapidly advancing in value, and the citizens generally are augmenting their wealth. The only exception to general prosperity seems to be with those engaged in developing the mineral resources of the county, and this seems to be a sad exception. If the iron business were in a prosperous state, it would form a very important item in the business of this section of country. But the most permanent business in this county is tilling the soil, and in that are the most of its citizens engaged.

Something has seemed to awaken anew the farmers of Pennsylvania to the subject of agricultural improvements, and the formation of agricultural societies for their promotion.

An agricultural society has recently been formed in this county, which is to meet at the Court House in Franklin, on the 24th inst., to choose its officers and transact such other business as may come before the meeting. Warren county has a society, which held its first annual fair in September last, and Pennsylvania was destined to hold her first State Agricultural Fair in 1851.

It is much better to awaken to the importance of this subject at the sixth or even the eleventh hour, than not to awaken to it at all. But why need we, of Pennsylvania, be so much in the rear of our fellow citizens of our sister States in these matters?—New York, Massachusetts and other States have devoted a degree of attention to this subject, unknown in Pennsylvania, and they have been richly rewarded for it. They have received their reward in many ways; in their Morgan and other fine races of horses—in their superior cattle, Short-horns, Devons, Ayrshires, &c.—their superior sheep and swine, and above all, in their improvements in agricultural implements, their reapers, their mowers and their threshers, by means of which such a vast amount of human labor is saved. A man, a boy, and a pair of horses with a good mower will cut as much grass in a day as ten or twelve men with scythes, and the same of other implements.

It is from the labor-saving machines that the greatest benefit is to be derived. The doctrine that disapproves of the use of machines because it throws so many men out of employment is but “the blind leading the blind.” It was urged at the introduction of the printing press and the spinning jenny, but what revolutions have they not wrought in literature and manufactures? And revolutions, approximating to these in some degree have already been wrought in agricultural labor and progress.

J. C. STARR.

Allegheny, Venango co., Pa., Nov. 19, 1851.

For the Farm Journal.
Curing of Corn Fodder.

MR. EDITOR: Since the old practice of blading and topping corn for fodder has been superseded by the better one of cutting off the stalk within a few inches of the ground, the value of fodder as provender has claimed more attention. Much, however, remains to be done to secure corn fodder so as to render it most palatable to cattle. While the present practice of cutting off the stalk near the ground is, for several reasons preferable to the old one, there are yet some objections to it, which, however, a very little care will effectually obviate.

The practice which now generally prevails, is to cut off the stalks, and immediately bind them together in close shocks, where they are permitted to remain until the corn is ready to be husked from them. They are then drawn to the vicinity of the barn and stacked for use during the winter. A writer in the Maine Farmer, in a brief article condemns the immediate binding and shocking of stalks in the field, urging as an objection to it, the fact that the free circulation of air, so essential to the sweetness of the fodder is prevented by it. He contends that corn fodder should be cured by laying it on loose heaps immediately after cutting, with the butts higher than the tops. This plan causes the rain which may fall while the fodder is in the field, to run off, instead of saturating the blade and stalk, by penetrating between them, as is the case when the stalks are placed in shocks. Besides, it gives the air a chance to circulate and thus cures the fodder in the best condition. There is good sense in the suggestion if we only knew how to arrange the stalks so that the butts would lay highest. This he proposes to do by laying the butts "on the corn." If by this we are to understand that the corn is to be pulled from the stalks and thrown in heaps on the damp ground, to form a resting place for the butts of the stalks until dry enough to be taken to the barn or stack, the damage the corn would be likely to sustain, would more than outweigh the advantages to the fodder.

Again, if the stalks are laid at full length upon the ground, with the butts sufficiently raised to cause the rain that may fall, to run from them, it brings a large portion of the blades, which are the most valuable part, in direct contact with the damp ground. This is another objection to Mr. Burns' method, and a very serious one.

His plan of putting them when thoroughly cured on the top of the hay, after it has settled, may do very well, where the corn crops are small, but would scarcely answer where the fodder from twenty or thirty acres of corn is to be taken care of. The question then is, how shall our fodder be secured when taken from the field, so as to keep it from the ruinous effects of moisture and consequently, mustiness. My plan is, to load the fodder as it is cut,

draw it to the barn floor and sheds, where such quantities are stacked as we can find room for, and permit it to remain there until the corn is fit for husking—We cure the remainder by laying rails four or five wide, on the ground, raising the outside one, by means of blocks or stones. The butts of the stalks are placed on the raised rail, which is sufficiently high to cause any rain that may fall to run off from the fodder. Four or five lengths of rails, arranged in this way will be sufficient for a large quantity of fodder; and the advantages of this method over that of Mr. Burn's are, that the whole of the stalks are kept clear of the ground, while the air has a much better chance to circulate through them.

After the fodder is well cured, and when it is free from moisture, we stack it convenient to the barn yard, in the following manner: A strong platform running North West and South East, is made, two rail-lengths in width, raised in the middle sufficiently high to compensate for the difference in size between the butt and the top of the stalk. The fodder is then stacked butt outwards, care being taken to keep the middle of the stack the highest. This precaution is necessary if we wish to prevent the rains and melting snows from running towards the centre of the stack. We cap the whole with long straw, and always commence using it at the South West end, by this means protecting the open end from the driving North West storms. Snow is never permitted to lay on the stack and melt. By this means the fodder is cured sweet and clean, and the cattle eat it as readily as hay, and (with an occasional change,) with as much apparent advantage.

R. MANSFIELD.

Chester co., Dec. 15, 1851.

For the Farm Journal.
Stir the Soil.

MR. EDITOR:—Somebody has said,
"The more we hoe,
The more we grow."

A volume of truth in a few words. If cultivators of the soil appreciated as they should the advantages of stirring the soil frequently and well, seasons of drought would neither be so much dreaded or felt, as they now are. During the last summer, we suffered more from drought, than for many years previous. Vegetation suffered greatly, and what was very unusual, there was a long spell of dry weather in almost every section of the United States.

During the month of August, when almost every green thing was wilted and drying for want of moisture, I was much struck with the fresh appearance of the vegetables in a small garden, belonging to a very industrious old lady, a neighbor of mine. So strong was the contrast between this garden and the adjoining fields, that I one day stopped, and inquired the cause, presuming of course that water had been plentifully supplied to it. What was my surprise, at

learning that not a single drop of water had been given it, but that the healthy appearance of the vegetables was attributable solely to the regular working which it received. "My garden never needs any water," remarked the old lady, "although my neighbors gardens do, and the reason is a very simple one. I always keep down the weeds by hoeing the ground as deep as I can without injuring my vegetables.—This gives the roots a chance to spread themselves in every direction, and I find where I keep the ground well loosened, that it never becomes as dry, as when it is permitted to remain hard and rough. This is the whole secret. Your garden would be in as good condition as mine if you would follow the same plan."

There was truth in every word the old lady spoke. Her garden showed it, and reason sanctioned it. I learned an important fact, which I shall endeavor to improve upon hereafter, that is, to *stir the soil deeply and thoroughly.*"

E. SPANGLER.

York co., Dec. 18, 1851.

For the Farm Journal.

What will Pennsylvania farmers do without their Journal?

You see, Mr. Editor, I have slightly altered the caption of one of your articles in the December No. of the *Journal*, and although I cannot subscribe myself a farmer, I am, however, what every Pennsylvania farmer ought to be, a friend of the "Farm Journal;" and to prove it, I send you a new subscriber. This, I will presume to say, may be (with little exertion) in the power of all your patrons.

Allow me to ask one more favor of those who, with myself are daily trying to bring more out of the mother earth, and that is to *make a note of it*, and send it to the *Journal*. Your highest estimate does not half approximate to the amount of benefit you will confer to the State, by the diffusion of sound practical intelligence on the cultivation of the soil—the rearing and feeding of stock—the right sort of implements to use, and how to use them—the best seed, the most beneficial manner, (regarding cost) and the quantity of produce from the acre. My good sir, it is a fact, that ten acres well worked, manured and cropped will produce as much as thirty (I was going to say fifty) under the ordinary culture, and cost less labor in hay time and harvest. No standard short of three tons of hay—thirty-five bushels of wheat—eighty bushels of corn—with four to six hundred bushels of carrots, parsnips and mangold wurtzels—and six to eight hundred bushels of turnips, per acre, should satisfy us. Only think, \$200 per acre for carrots and turnips in the Philadelphia market, and a market at the door. It is many years since I was favorably impressed with the benefits of subsoil plowing, but the past season put a climax on all my former experience. Land that was subsoiled was more moist, the crops of a better color, and more lux-

uriant, so much so, that I have determined to double plow ten or more acres of my land every year. *No time to be lost with the farmer, horses to feed and labor to pay.*

R. BUIST.

Rosedale Farm and Nursery, Dec. 16, 1851.

For the Farm Journal.

Influence of the Moon.

DEAR SIR: It has been written that Error is in all eases, a worse enemy to Science than Ignorance—and as your Journal justly claims to be an advocate of Truth and Knowledge, you will indulge me in a few brief hits, at one of the most *obvious* popular delusions of the times. I would scarcely arrogate to myself the right to assail any but such as are too egregious and transparent, to bear discussion.

It was once almost universally believed, and still credited by many, that the Moon, not content with her proper and pre-ordered functions keeps watch upon the Earth, for the purpose of regulating the growth of cabbage and other matter of equal or even greater importance. These things, she is supposed to effect by her changes.

As mere sciolists, standing at the threshold of the Temple, let us humbly inquire what these changes are. It is taught by the vast science of astronomy, that since the first dawn of creation, *the Moon has never changed*; that she has looked down on the transient and varying fortunes of mankind, with the same unpitying face "since the morning stars first sang together for joy." No man ever has seen, and no man ever shall see, but one half of her surface,—and that forever *the same half*. Thus she rolls on, in her boundless pathway, equidistant, undiminished and unchangeable.

But she *does* change, says the untutored observer of the Heavens. Sometimes she is full—sometimes half—sometimes quarter, and sometimes, *not at all*. No, Sir! She is always, and ever shall be, till the Power that created, shall uncreate. Though the Moon presents always the same face to the Earth, she permits the Sun to shine on every side of her, by turns. And as the Sun can illuminate but one half at a time, it follows that we do not always behold the "lighted" portion of her, or the whole of it. This makes the apparent difference in her surface. Yet she is all there, and forever *full*, to him who could choose the point of his observations.

We hear men of sense, and occasionally learned men, speak of the next change of Moon, and prophesy "a spell of weather" or something else, as a consequence. *When does it change?* (I allude to its apparent mutations.) Does it jump suddenly from one quarter to another? Or does it vary as much one instant as another, *gradually, constantly, and eternally?* Most undoubtedly the latter. Then how can its variations affect the weather—the garden-truck—the fence-rails—the shingles on the roof—the manure on the grass—the apples in the cellar—the dinner in

the pot, and multifarious other little things, more yesterday than to-morrow? Once upon a time, a choleric old fellow, who had stimulated his organ of combativeness, by imbibing something stronger than moonshine, called the subscriber both a fool and a rascal for attempting to disprove to him the infallibility of these signs. As this mode of argument is calculated to lead to still greater differences of opinion, it may be properly set down as one of the troubles to be contended with, in confuting these delusions—particularly as the disciples of Falsehood are generally both pertinacious and pugnacious. Another trouble is, a believer in signs is always satisfied, if they hold good once in two or three times, whereas, there should be no variations, if they be, in reality, laws of Nature. For laws of Nature are imperative and inevitable, and whosoever outrages any one of them shall suffer the penalty pre-ordered by the Great Creator. Yet these laws of moonshine are verified or fail, alternately. They could not reasonably be expected to fail oftener.

But says the man of signs, the Moon affects the tides, and therefore it must influence the cooking of my pork and sour-crust. This is the sort of logic, that establishes the all pervading power of Luna, over meat-tubs, crout-barrels and cream-pots. Because Dr. Quack-Donkey's Magical Pain Extractor will draw a bile to a head, it does not necessarily follow that it can draw a load of wood, equal to a yoke of oxen—yet the one sequence is about as rational as the other. By a great natural law, called gravitation, the Moon and Sun attract the waters of the earth in different a degree, according to their positions, with a certainty, that would admit perhaps of mathematical calculation for millions of ages into the Future. And with equal certainty and precision would every other real influence be felt.

Two years ago I hired a man to gather apples.—He very gravely assured me, they would rot in a short time, if taken then, because it was the wrong sign. I requested him to proceed with his work as diligently as possible, that the apples might all be picked, before the sign came right. In spite of my skeptical audacity, they lasted longer and better than I ever knew them to last before. What a most incontrovertible proof of the sign, if somebody else had gathered their apples at the same time, and lost them!

If a certain quarter must produce rain or snow, or clear weather, as an unavoidable result, why does not one sort of weather pervade the whole earth, at the same time? For certainly at the same instant, a sign of the Moon will prevail equally in Terra del Fuego, and in Kamtschatka, in Greenland and in Borneo. And as these quarters must occur within seven days of each other, "no spell of weather" can commence more than three and a half days from

any change. And I know, Sir, believers are willing to conclude even greater variations.

When we reflect that the Globe we inhabit is but an atom—a grain of dust in the stupendous systems of which it is a portion, we shall be forced to believe, that the vast and infinite worlds, that surround us, have more important functions, than the control of the humble destinies of Earth and her feeble children.

I trust, Mr. Editor, this short imperfect article will bring out some more practised and skilful pen to the support of Truth. There is no error too absurd to be combatted, nor too insignificant to be overthrown. Truly yours,

DAVID TAGGART.

Northumberland, Dec. 8, 1851.

For the Farm Journal.

INDELLIBLE INK FOR MARKING LABELS FOR TREES, SHRUBS AND FLOWERS.—*Mr. Editor:*—I am so much pleased with an article of ink for writing on zinc, made by Mr. HENRY H. KELLEY, No. 288, N. 2d st., Philadelphia, that I am induced to inform you of it, that you might publish it for the benefit of your readers.

It is a black ink, writes beautifully on zinc, and will bear exposure to the weather for many years.

It can be obtained of Mr. Kelley, at \$1.00 per pint.

I know of no method of labeling trees so economical as to cut small cards of zinc, mark them with this ink, and attach them to trees by a loop of copper wire.

JOHN WILKINSON.

Mount Airy Agricultural Institute, }
Germantown, Pa., Dec. 6th, 1851. }

For the Farm Journal.

Seed Potatoes,

MR. EDITOR:—Now is the time to select and look over your seed potatoes. Spread them out thin on the cellar floor, turn them frequently, do not allow them to sprout, the frequent turnings prevent it and reserves the energies of the tuber to make a healthful growth as soon as it is deposited in its destination in the soil. This is no theory. It is a solid practical fact for every gardener and farmer.

R. BUIST.

Rosedale Farm and Nursery, Dec. 16, 1851.

Partridges and Weeds.

MR. EDITOR:—Do you not think the destruction of Partridges, one of the most prolific sources of weeds? It is well known that these birds are granivorous, and that when their favorite food becomes scarce, they readily eat the seeds of many of the plants that are exceedingly troublesome to farmers. How many days of hard labor are required on farms generally, to destroy the weeds which spring from seeds that would have been eaten by Partridges, had gunners not been permitted to destroy them? Birds of all kinds are friends of the farmer and deserve his protection, and the farmer who permits them to be destroyed should not complain if his fruits are wormy.

AVIS.

For the Farm Journal.

Agricultural Nuisances, No. 5.

CHEAT, CHESS.

French, Brome Seigle. *German*, Roggen Trespe. *Bromus secalinus Lin.* *Bromus arvensis*; and *Bromus* of *Weigel*, but not *B. arvensis*, of *Lin*. *Bromus Ehrhartae, Roem*, *B. hordeaceans Gort*, *B. maximus Gilib*, not of *Delf*. and *B. squarrosus, Lam.* not of *Linn*.

The name of this genus was proposed by Monte about 1720. It is derived from the Greek *Broma* which signifies food, and its specific names come from the Celtic, *sega*, a sickle—to cut with a sickle, or perhaps from Rye, meaning rye grass. The genus now contains about 112 species, 4 are natives of the United States, and 3 or 4 more have been introduced.

It belongs to the 3rd class, *Triandria* and 2nd, Order *Digynia* in the Artificial System of Linnæus.—to Order *Graminæ* and Tribe *Festucinæ* in the Natural System.

The Natural Order *Graminæ*, or in other words the "true grasses," is a very large one, and contains nearly 2500 species, which preserve a remarkable similarity of character, for whether we examine a minute *Poa*, or a mighty bamboo 60 feet in height, we are often perplexed with the general resemblance in the characters and habits of all the members.

Every farmer knows this too common weed, and it is, therefore, useless to describe its general appearance. But, as a notion prevails, that Cheat is nothing but a degenerate wheat, I will try to find out some of the distinctive characters of the two plants, a task, difficult for me to render intelligible, without recourse to botanical terms. But the two plants are very distinct and do not belong to the same sub-division in the Natural system.

WHEAT.

The flowers in a compact head at the top of the stem presenting 4 sides.

The flowers in clusters of from 3 to 5 lying over each other, with scarcely any footstalk, upright, 3 of them usually producing fruit and 2 of them abortive.

These clusters egg shaped, blunt flattened, rough on the upper surface, outer chaff, swelled out in the middle, crosswise egg shaped, blunt and nearly equal in length, not ribbed, not notched.

CHEAT.

The flowers disposed on secondary stalks, which are loose and variously and irregularly sub-divided.

The flowers in clusters of from 8 to 10 a little remote at the base, and not lying over each other, turned downwards! These clusters, loose, slender, swelled, smooth, and generally all producing fruit.

Outer chaff boat shaped, lengthwise, the lower chaff shorter than the upper, with 5 ribs tapering to a small sharp point. The upper one blunt and 7 ribbed, two cleft.

The seeds are differently shaped and the two plants are quite distinct throughout.

I hear that a distinguished botanist in Europe has asserted that it is possible for this transmutation to be effected, but 15 years of careful examination on all the varieties of soil in the Middle States, from the marshy diluvian of the Delaware to the plateau of the

Allegheny Mountains—from the sands of the New Jersey beaches to the rocky cliffs of the lakes; has not furnished me with any positive evidence of this transmutation, and I have had hundreds of farmers, firm in the belief, engaged to furnish the fact. The seed from which the cheat springs can, at almost any season, be found attached to the root, and in every instance, when examination has been made, it has been found to be cheat! and not wheat! The plant under consideration is one of great uniformity of character, subject to but few varieties, if indeed any. Its characters are the same among all kinds of wheat, whether white or red, bearded or smooth, mediterranean or blue stem, winter wheat or spring wheat, Polish wheat or spelt, rye or barley, oats or timothy; in the swamp or on dry ground—the serpentine barrens at West Chester, or the coal shales of Clearfield—from England, France, Germany, or the valley of the Mississippi. Again, the "hessian fly" does not attack it—the "smut" affect it—or the "rust" take hold of it. It seems to escape the diseases incident to wheat, and the attacks of the insect, peculiar to that grain. It has peculiarities of its own. Its seeds are more hardy, the embryo smaller, the whole plant more prolific, both in the number of stalks from one root, and the amount of fruit it produces. It has its own diseases, and insects peculiar to it are found on it.

The erroneous ideas respecting its origin has filled the "earth" with its seed, and untiring zeal and industry can only remove one of the greatest nuisances that ever invaded the farm. J. M. McMILLIN.

Unionville, Centre co., Pa., Nov. 15, 1851.

For the Farm Journal.

Guano vs. Lime.

MR. EDITOR:—In the November number of the "Journal" an article upon Lime, by Enoch Lewis, is calculated, I fear, to underrate the importance of embracing all the means of fertilization that we may obtain—particularly that highly valuable manure, guano.

While I wish it understood that Lime is not undervalued by me, but considered one of the valuables—operating to change the nature of compounds—liberating useful material—and rendering soluble that which is insoluble—still we are inclined to question the propriety of too much use of this, independent of other manures. An acre of wheat contains some 10 lbs. of lime, by analysis, exhibiting the necessity of other manures than this, which must be supplied, if not already on hand. Dr. Dana (Muck Manual, p. 45,) says:

"All soil contains enough of lime, alkali, and other inorganic elements for any crop grown on them."—And this, too, for a great many generations, a repetition of cropping being pursued. It is also exhibited by the same writer that the silicates, uretes, &c. being according to chemical affinity unavoidable, we are

required to disturb the combinations by creating new; thus liberating, and rendering soluble the required stimulus to growth.

A little lime judiciously applied will operate for good, while an excess will render inert that which might have been food.

Just so, "too much of a good thing is worse than nothing." Super-geates made by lime are useless—Too much devotion to one idea prevents improvement.

Why not use Guano? containing as it does according to Voelekel,

Urate of ammonia,	9.
Oxalate of ammonia,	10.6
Oxalate of lime,	7.
Phosphate of ammonia,	6.
Phosphate of ammonia and mag.,	2.6
Sulphate of potash,	5.5
Sulphate of soda,	3.8
Muriate of ammonia,	4.2
Phosphate of lime,	14.3
Clay and sand,	4.7

Here is a rare combination of salts and guin, and is certainly one of the most powerful manures we can apply.

It is not necessary to refer to the surprising effects produced on the waste lands of New Jersey, Maryland and Virginia for proof. Every one can see it must be highly valuable, from its very strong array of fertilizing materials. E. L. admits that it rapidly imparts a high fertility to many soils." He continues "it loses its virtues in a comparatively short period," &c. May I not ask, what is lost by an increased wheat crop of some eight or ten bushels per acre?—Are we not paid too by increased manure piles?

One good crop of clover will be the means of producing another. Its long tap roots penetrating the lower soil will bring to the surface, in the stalk and leaves to be embodied, (and, if plowed down, and mixed with the upper mould by turning,) the enriching material of the lower earth made available food for plants.

Thus, may I not say, once begun, we have yearly benefits dating to our first application of guano, a hundred fold repaying.

Gypsum in its power of collecting ammonia will cause a larger growth of clover, and of any grain requiring nitrogen. This is an expensive manure, and so light as to be, apparently, almost too insignificant to warrant the cost. Yet is not the impetus given to our crop, oftentimes the means of enlarged growth again and again?

I hope we consent to seize hold the chances of increased fertility by other means than lime alone that is more an agent than a manure. We will find our lands grow fatter and our purses larger—our stigma of being skinners removed and all classes benefitted.

N. J. S.

Downingtown, Chester co.

N. B. I have no guano to sell.

Our Poultry Yard.

For the Farm Journal.

Poultry.

MR. EDITOR:—When modern poultry fanciers assert that to be of pure breed, Shanghae's must be of a particular color: Cochin China's of a certain other color; Polands entirely black, except the crest, which must be white; and Jersey Blues entirely blue; do they not go too far? Is it not almost universally admitted, that domestication changes the color of animals, as well as birds? Look, for instance, among our turkeys, of comparatively recent domestication. Have we not the jet black, pure white, bronze, and every intermediate shade? Have we not also, pure white, almost entirely black, and many shades between, of Guinea fowls? So, too, might be instanced on the best authority, particular cases of isolated pairs of Canary birds, and Poland chickens, whose descendants in a few years, materially changed their color.

Who would dare to assert that these are no longer Turkeys, Guinea's, Polands or Canaries of pure breeds?

Why should vendors of particular breeds declaim against the impurity of those sold by others, because of color? And is it not equally absurd, to sweep indiscriminately into one class of MONGRELS, and endeavor thereby to stigmatize, all chickens that breed of different colors? Is it not known that these contemptible mongrels may, with care, be "bred to a feather?" But who desires so to do? Is not a variety of coloring desirable, as well for beauty as to distinguish individuals? Have we not already white, red, speckled and buff Shanghae's? Might we not have had a greater variety, had our importations been direct from China, instead of London, where, no doubt, the utmost care is taken to breed of a *saleable* color.

Who that is disinterested can for a moment doubt, that our Bucks county ostrich fowls were originally derived from the same stock as Cochin Chinas or Shanghae, and that the Jersey Blues are their crossed descendants? Why then pay twenty, ten or five dollars for chickens *no better* than those we have or can have for six or eight cents per pound.

As to the productiveness of different varieties let fanciers tell their own tales.

One asserts, to be the best, the Chittagong; (which another pronounces a mongrel,) another a Poland; a third the Black Spanish; a number the Shanghae, buff and white, and Cochin China; and still a greater number, the Creole.* Would it not appear from this that individuals of every kind are prolific? If a disposition existed to add to this excitement, instances of productiveness could be given of dunghill mongrels—is that low enough, Mrs. Shanghae—that would astonish every thing but natives.

Then again, these modern prodigies produce eggs

*See the different letters in Dixon & Kerr.

of a "greater size and richer quality." Ah, indeed! Is it so remarkable that large hens, honsed and nursed with care commensurate with price, fed abundantly, with the best of food, even wheat occasionally, should produce large eggs? Do not the quality of the flesh of animals and their secretions, as well as the eggs and flesh of birds depend upon their food? Does not the Vallimeria spiralis, give the desirable flavor to the flesh of the canvassback duck? Who has not early in spring, when other green food is scarce, perceived the flavor of garlic in eggs, as well as the milk and butter of cows, and indeed beef?

Does not chemistry teach, that no new elements are formed in the animal? If so, then of course the quality of the egg will depend upon the food and the

health of the individual properly to elaborate it.—Depend upon it, quality and quantity of eggs depend more upon quantity and quality of food than is dreamed of in —'s philosophy.

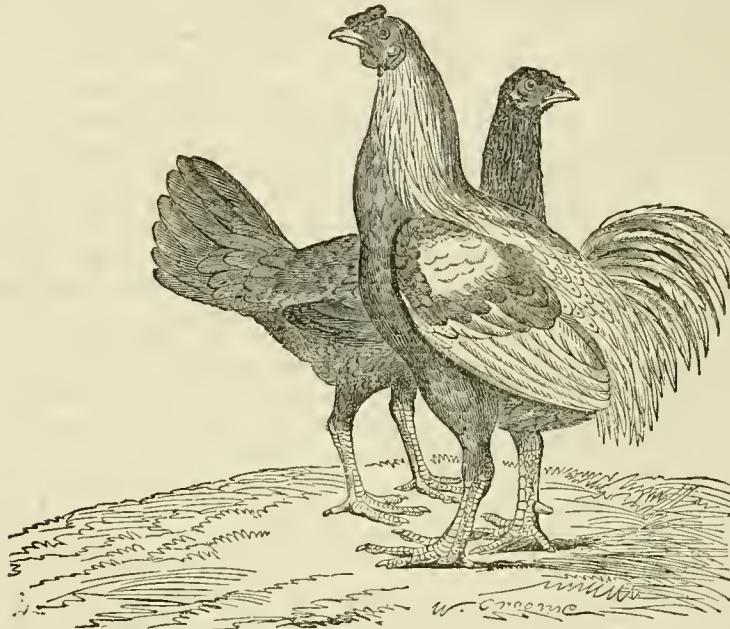
The only benefit, therefore, which can result from this chicken speculation, will be more careful observation with regard to productiveness, and desirableness of form, in particular individuals, and their preservation for breeding.

By this course we may, my word for it, have *very* good prolific chickens of different colored mongrels.

J. K. E.

Chester co., Dec. 15, 1851.

HEN MANURE.—There is no more valuable manure than this. Preserve it carefully.



THE MALAY FOWL—SOMETIMES (THOUGH ERRONEOUSLY) CALLED CHITTAGONG.

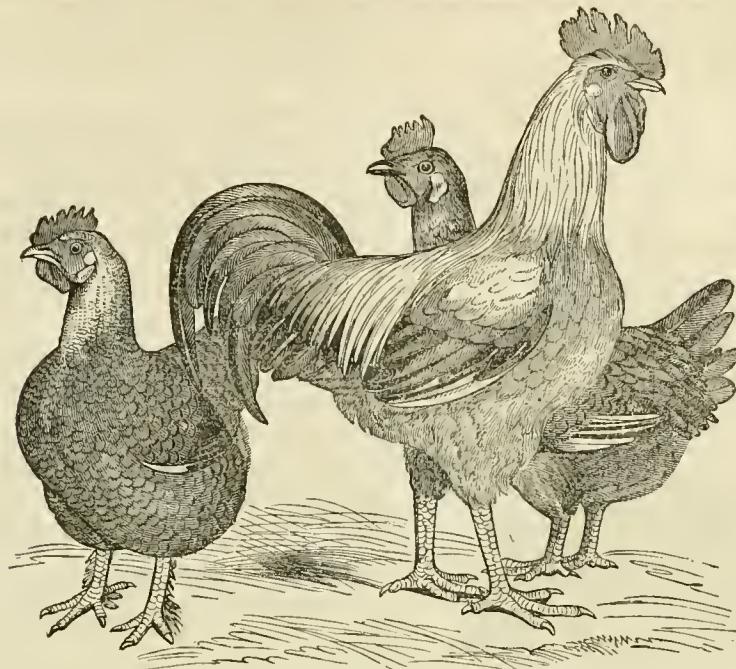
THE MALAY FOWL.

This is a majestic bird, and is found on the Peninsula from which it derives its name. Its weight, in general, exceeds that of the Cochin China, the male weighing, when full grown, from eleven to twelve, or even thirteen pounds, and the female from eight to ten pounds;—height, from twenty-six to twenty-eight inches. They present no striking uniformity of pugnacity, being of all shades, from black to white; the more common color of the female is a light reddish-yellow, and I have observed a mere suspicion of dunish-blue, especially in the tail. The Cock is frequently of a yellowish-red color, with black intermingled in the breast, thighs, and tail. He has a small, but thick comb, as seen in the portrait, generally inclined to one side; he should be snake-headed, and free from the slightest trace of top-knot; the wattles should be extremely small, even in an old bird; the legs are not feathered, as in the case of the Shanghaes, but, like them and the Cochin Chinas, his tail is small compared with his size. In the female, there is scarcely any show of comb or wattles. Their legs are long and

stout; and their flesh is very well flavored, when they have been properly fattened; and their Eggs are so large and rich, that two of them are equal to three of those of our ordinary Fowls. The Malay Cock, in his perfection, is a remarkably courageous and strong bird. His beak is remarkably thick, and he is a formidable antagonist when offended. His crow is loud, harsh, not prolonged, as in the case of the Cochin China, but broken off abruptly at the termination; this is quite characteristic of the bird.

CHITTAGONG FOWL.

In and around Philadelphia, we have a large Fowl, to which the above name has been incorrectly given, as, on further acquaintance, it has proved to be a mongrel, and, like most mongrels, comparatively worthless. Until within a short time, it went under various names, as Ostrich Fowl, the Turkey breed, the Big breed, the Booby, the Bucks County Fowl, and even the Malay. It is difficult to trace its history. Some forty years ago, several large Fowls were brought hither from different parts of China, the East Indies, and



MR. D. TAGGART'S CHITTAGONG FOWLS.

the adjacent isles; subsequently and within a few years, others were added. These all, except in a few cases, have been mixed, and breed indiscriminately; and the result is the Fowl to which, according to the people, the above names have been applied. It is of all colors, from black to white, frequently speckled, sometimes red and black, and again dun. When bred, it will generally produce its like in point of size, but rarely in point of colour, showing it, unquestionably, to be a mixture of several original breeds. They are not very good layers, though their Eggs are very large and rich. Their legs are sometimes lightly feathered, not always, and vary in colour from yellow to a dark or bluish hue. I once had a Pullet of this kind which weighed eleven and a quarter pounds; the usual weight for full grown males, is from ten pounds and a half to twelve pounds; females, from eight to ten pounds. They are generally quite leggy, standing some twenty six inches high, and the Hens twenty two inches. A first cross with the Shanghae would make a *very large* and valuable bird for the table, not for breeding from.

Mr. Taggart, of Northumberland, Pa., is disposed to think favorably of some Chittagongs he received from me, with a pair of Shanghaes. They are all yet quite young. He says:

"Of all large breeds, it strikes me the Chittagongs are most prolific. My Brown Pullet began to lay on the 10th of October, when not much over five months old. In twenty two days she laid eighteen Eggs, (or, I may say nineteen, for one was double,) and then began to sit. Her laying was after this fashion: 3, 3, 4, 3, 5. No doubt I could have kept her at it, by changing her nest from time. It is extraordinary that a Pullet of her age should *lay so fast at this time of year*. After incubating a week, she grew very sick, and I was forced to break her Eggs and take her off. When she began to lay she weighed six and three-quarter pounds, now only five pounds. But she is rerecovering."

[We are indebted to D. Taggart, Esq., of Northumberland, for a pair of his Chittagongs. We do not know their precise age, but from their appearance, presume they are not more than six months old.—The cock is a fine looking bird, very large and well formed. The pullet we think equals in form any of our best Shanghaes. In point of size she exceeds them, and her laying qualities equals theirs, with this in favor of her eggs, that they are much larger. We propose testing the comparative value of the two breeds, by giving both the same food and lodging.—Mr. T. has our best thanks for the fowls.—ED.]

List of Articles

Exhibited at the State Agricultural Fair at Harrisburg, by E. Whitman & Co., Baltimore.

Whitman's Improved Wrought Iron Railway Horse

Power, 2 horse; do. 1 horse.

Eddy one wheel horse power.

Whitman's Iron Cylinder Thresher and Cleaner; do. and Straw Cutter; do. Plain; do. Overshot; do. Improved Hay Press.

McCormick's Improved Reaping Machine.

Whitman's Iron Corn Sheller; do. Double; do. small Double; do. Single; do. Vertical Plate; do. Cylindrical Straw Cutter.

Macomber's Straw Cutter.

Ruggles' Straw Cutter; do. Vegetable do.

Pitt's Corn and Cob Crusher.

Beals' Corn and Cob Crusher.

Whitman's Improved Chain Pump; do. Garden Roller; do. Futa Roller; do. Thermometer Churns; do. Cart Harness; do. Wagon do.

Prouty & Mear's Plow, Nos. 1, 2 $\frac{1}{2}$, 3 $\frac{1}{2}$, 5 $\frac{1}{2}$, 6 $\frac{1}{2}$; light 54, 55.

Ruggles' Plow, Nos. 1, 2, 3, 4; deep till, 54.

Minor & Horton's Plow, Nos. 18, 18 $\frac{1}{2}$, 19, 19 $\frac{1}{2}$, 20, 21.
Chenoweth's Plow, Nos. 7 and 8.

Davis's Plow, Nos. 7 and 8.

Moore & Chamberlain's Plow, No. 6, 7.

Beach's Concave de. " 7, 8.

Barshare do. " 2, 8.

Subsoil Plow.

Woodeck's do. " 1, 2, 6.

Whitman's Improved Cultivators; do. Expanding Cultivators.

Gieddes Harrow.

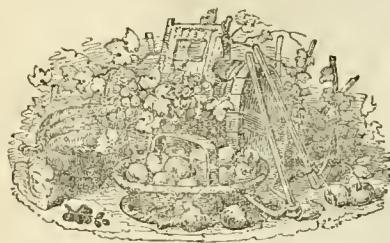
No. 2, Ex Bamborough's Wheat Fan; No. 5, Grant's do. do.

Gatchels Water Ram, No. 2.

Grant's Improved Grain Cradle.

Grain Scythe and Scauth; Bramble do. do.

Agricultural Cauldron 60 gal. All of the above together with upwards of 500 different kinds of small tools.



Horticultural Department.

For the Farm Journal.

Evergreen Trees and Shrubs, No. 4.

Many of the new Evergreens of recent introduction into the United States are yet of so small a size as to give but little chance to judge of their habits and future value in the aheretum. New species are being rapidly brought into notice, and a disposition seems to exist among foreign nurserymen, to multiply mere varieties, founded upon exceedingly slight differences, and only serving to add to our already burdened catalogues. Excepting where, as a matter of curiosity and reference, the object is to make a complete collection, many of these varieties may readily be dispensed with. We shall notice such, as among our own importations, we have observed to offer some striking characteristics and will probably prove decided acquisitions.

Taxodium Sempervirens is one of the new discoveries from California, and from accounts of it in its native wilds, may fairly be placed at the head of all coniferous Trees. It has been found of the almost incredible height of 300 feet, and measuring 55 feet in circumference at 6 feet from the ground. Even in dense forests it has been found to average 200 feet. The bark is represented as exceeding thick, 6 to 12 inches. The timber is of a beautiful red color, close grained and light, and is exceedingly valuable—large quantities being exported. It is called by the American settlers red wood or bastard cedar. Specimens of this tree may be obtained at the nurseries, 2 to 3 ft. high, but we do not know that it has yet been tested

through the winter in the open ground. It is greatly to be hoped it may prove hardy. The foliage is a dark rich green, and its growth and habit quite distinct.

Abies Morinda or Himalayan Spruce is a very beautiful tree from the Himalayan Mountains, which we have tested in open ground, and found to be perfectly hardy. It resembles the Norway Spruce in its foliage and wood, but comes more up to the present fashionable standard, in drooping at all stages its growth. It will probably attain in our climate a height of 60 or more feet.

Picea Pinsapo or Mount Atlas Cedar, is also perfectly hardy here, and so far as one can judge from specimens about 18 inches high, promises to be equal in beauty to any other. It has attracted considerable attention in our grounds the past season. The leaves are very dark and sharp pointed, and grow all around the branches. The new growth at the extremities differs in the colour and length of the leaves, and in general appearance from that of the preceding year, making it altogether unique. Its growth would appear to be slow, with branches thickly set, and of upright habit. In its native place it reaches a height from 60 to 70 feet. We think this tree will prove a great favorite with the public.

Abies Douglasii or Douglass' Spruce, from the north west coast of America, is one of the largest trees known in the world, growing to the height of 150 to 200 feet. A stump was found at Fort George, near the mouth of the Oregon, (150 feet without branches, still remains,) which measured 48 feet in circumference, 3 feet from the ground. The habit of this tree is conical and erect, the leaves narrow and dark green above, silvery beneath. There are no specimens yet to be obtained in the United States but a few inches high.

Cupressus Torulosa or Twisted Cypress, is a species from the Himalayan Mountains, perfectly hardy here, graceful and beautiful. It is found in the Nepal ranges at an altitude of about 8000 feet, and about 40 feet high, pyramidal in shape, with numerous flexible branches. Its wood is fragrant and burned by the natives as incense wood. This tree has developed sufficiently in growth and habits here, to prove it a decided acquisition. Its foliage is light green.

Juniperus Excelsa, Fall Juniper is found in about the same ranges as the preceding, and is equally hardy, and also whole forests of it in the Islands of the Greek Archipelago. Its height is about 30 feet. Out of fifteen species of Junipers we have growing, we consider the Excelsa the most beautiful. Its habit is strictly erect and pyramidal, very regular in its outline, with foliage of light green colour and very glossy. Juniperus is a prolific genus, thirty seven species being enumerated in our foreign catalogues.

Picea Grandis, and *Picea Nobilis*, are two of the invaluable acquisitions from California and Oregon

for which we are indebted to the enterprise of Douglass, their first discoverer. Neither of them are yet to be obtained in the U. S. but a few inches high.—They are doubtless perfectly hardy here. *Picea nobilis*, was found by him near the cataracts of the Columbia in extensive forests, and is described in enthusiastic terms “as combining in itself all that is majestic in form and stature, beautiful in outline and majestic in proportion. Attaining in its native forests the stupendous height of 180 feet, it throws off at equal intervals its horizontal branches in whorls of such uniform order and arrangement, that each series forms a beautiful dense circular platform of the deepest verdure, broader at the base, and gradually narrowing their radius as they ascend. Neither is there the least approach to stiffness in this uniformity, On the contrary from the fine incurvature, both of the dense foliage and the lateral shoots, imparting a feather like softness to the branches, the entire tree is invested with a grace to which no description can do justice.”

Picea Grandis was found by him in great luxuriance in the humid valleys of northern California, attaining there the height of 170 to 200 feet, and is conspicuous no less for its great stature, than the rich bright verdure of its foliage.” It is not so valuable as a timber tree.

PASCHALL MORRIS.

West Chester, 1851.

LANCASTER COUNTY AGRICULTURAL SOCIETY.—The regular annual meeting of this society will be held at the Mechanics' Institute, on Tuesday, January 13th, at 10 o'clock, A. M., at which time various business matters of great importance will claim the attention of the members. In the afternoon, the annual address will be delivered by JAMES GOWEN, Esq. of Philadelphia county. The readers of the Journal are familiar with the high practical character of Mr. G.'s writings, and we trust that he will be welcomed by a large audience. We are requested distinctly to state, that ALL are invited to be present, whether members of the society or not. With the feeling that at present animates the farmers of this great county, the meeting above mentioned should not only be a full one, but it should be the occasion on which the future prosperity of the society should be established beyond the contingency of a doubt.

The *Model Architect* No. 5, has been received. We are glad to observe that each succeeding number gives marked evidence of improvement upon the last. The designs are not only well conceived, but beautifully executed, and the specifications, &c., accompanying them are full and complete. The present number contains a representation of a villa in the Norman style of architecture, giving not only full front, side and rear view, but also a very large number of lithographs illustrating the details of the building. We again commend this valuable work to the attention of our readers.

THE FARM JOURNAL.

Assistant Editor's Department.

A. M. SPANGLER, ASSISTANT EDITOR.

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Our Office.

Those having business to transact with us will please call at the Book Store of W. H. Spangler, in North Queen street, Lancaster, where we or our representative will at all times be in attendance.

Annual Meeting of the State Agricultural Society.

It will be remembered that the annual meeting of State Society will be held at Harrisburg, on Tuesday, January 20. The occasion will be one of great interest as well as importance, and we trust the attendance, not only of members but all who feel interested in the cause of agriculture, will be large.

OUR JANUARY NUMBER.—We offer no apology for calling attention to the character of the present number of our Journal. In answer to our request to contributors, a number of excellent communications have been received, the value of which will be understood by every reader. Why can we not have such numbers for all time to come? We trust an appeal to those who have been in the habit of corresponding for agricultural publications, as well as to those who have not, will receive attention, and induce every friend of agriculture to put his hand to the work.

Almost every day we meet with farmers who have had the advantages of many years practical experience, and yet, who, in answer to our repeated requests to communicate a small portion of that experience for the benefit of our readers reply, “We will, so soon as anything occurs worth publishing.” Many of these requests are made of men, who have been tilling the soil for twenty or thirty and even fifty years. Can it be possible that they have been engaged in agricultural pursuits for so long a time and not learned something worth communicating for the benefit of their fellows. We met one of this kind a few days since, a most excellent practical farmer. The usual reply, “I know nothing worth writing about,” was given, and yet, before ten minutes had elapsed, he gave us, in conversation, the results of several highly

interesting experiments. Sitting at our desk while he was relating them, we took notes as he went along and when he left our office, put the notes in the form of a communication. He returned shortly afterwards and was not a little surprised to find that one of his experiments formed the basis of one of the best practical articles in our present number, and he left us far better satisfied than when he entered our office. He felt that he had done something which might be valuable to others. The ice was broken, and we have not a doubt that this little incident will be the means of calling out other facts equally valuable. Are there not thousands and tens of thousands such in Pennsylvania? There are, and they are wanting in duty to themselves, and those who are to succeed them, if they permit valuable truths to die with themselves. "Believe that you can do a thing, and it is half done already," was a favorite saying with one who was never known to fail in any thing he undertook. We say to those who hesitate about writing for the Journal, believe that you can do it, if you don't succeed, it will then be time enough to say you cannot.

The State Fair--The Plowing Match.

We could not but regret that the great variety of plows entered and the necessarily limited time allowed for trial, prevented us from examining as minutely as we desired and intended, the character of the work performed by each. There may be those whose superior judgment, and perfect familiarity with the implement, enables them to pronounce upon the merits of a plow at first view. We confess that we are none of these; and therefore require a sight of the plow when at work, in order to judge of its merits. Neither is the turning of half a dozen furrows in soil of the same character, a conclusive criterion by which to judge of the value or worthlessness of a plow. Some plows from their peculiar construction are best adapted to light soils, others, to stiff heavy ones, and therefore, to decide upon the merits of the two, from a trial in soil of the same character is manifestly unfair to one or the other. Again, however competent the gentlemen who compose a ploughing committee, it appears to us utterly impossible for them to decide properly upon the value of four or five out of twenty ploughs, when the regulations are such as usually govern ploughing matches, viz; compelling all the plowmen to start their teams at the same moment and complete the amount of work allotted to be done, within an hour. An hour we should think little time enough for the trial of a single plow, much less twenty, and as the agricultural community is looking for an implement best adapted to general use, it would seem next to impossible, to decide upon its character in this respect, when the trial of it is confined to only one kind of soil. It should be tried in different kinds of soil, and by different plowmen. The skill which a man may acquire in the use of a very inferior implement, may be such as to

enable him to do fair work with it, and thus impose upon the judgment of the committee. Different plowmen should hold them in different soils, and to the plow most easily managed and performing the best work, should be awarded the first premium.

In speaking thus, we design, no reflections upon the decisions of the Committee at the State Fair Plowing Match, for we believe they were made with strict reference to the merits of the different plows. The high character of the gentlemen composing that committee was a sufficient guarantee that their decisions would be made in accordance with the strictest principles of justice to the contending parties. We advert to the subject, merely for the purpose of calling attention to it, with the hope that it will be deemed sufficiently important to call forth at the next State fair, a new set of regulations in which more time and better opportunity will be afforded the committee to make their decisions and a fair chance to the different manufacturers to exhibit the commendable points of their implements.

The first premium was awarded to Jesse Pawling of Montgomery county. At several plowing matches we attended during the fall, we were favorably impressed in regard to the Pawling's Plow. The ease with which it was operated, the apparent lightness of draft, and the character of the work performed by it were all in its favor. It is a centre draft, and constructed upon nearly the same principles as Prouty's. It does not appear to be well adapted to heavy or stiff soils, but having never seen it tested in such, it would be unfair to give an opinion concerning it in this particular.

The second premium was awarded to Geo. Brindle of Cumberland county. We have no recollection of a plough having Mr. Brindle's name as maker. Our impression was, that the second premium was awarded to Plank's Cutter Plow, made in the same county. If we are mistaken, we will cheerfully correct the error. The first premium in duplicate, was awarded by the Committee on Implements, before trial, to Prouty & Mears, No. 5 $\frac{1}{2}$, and to Plank's Cutter Plow, No. 57, and we may have gleaned our impressions from this fact.

Prouty & Mear's No. 5 $\frac{1}{2}$ was awarded the third premium. This plow has acquired a celebrity which renders an extended notice by us unnecessary. In many sections of the country it is considered the *ne plus ultra* of plows, and for adaptation to light soils, we think it an admirable implement. Whether it will compare in lightness of draft with Pawling's we had no opportunity of ascertaining; but if the condition of the teams may be regarded as a criterion, the odds were evidently in favor of Pawling's.

The fourth premium was taken by Jonathan F. Garrard of Allegheny county, for his Sod plow, No. 11. Our attention having been drawn to this plow before and during trial, we were not disappointed in the

decision of the Committee respecting it. As a Sod plow it worked admirably, effecting a complete inversion of sod and sufficient pulverization to cover entirely every vestige of grass. This was as effectually done by the plows already named, though we think they had somewhat the advantage in the thinness of the sod, and lightness of the soil.

To Hall and Speer of Pittsburg, the fifth premium was given for their Iron Plow, No. 10. No implements on the ground attracted more attention than the plows exhibited by these gentlemen. Finished in the most beautiful style, and of a construction admirably adapted to good work, the favorable impression created by their appearance was strengthened by trial.

Many other plows of excellent make were entered and to quite a number of which diplomas of merit were awarded, and favorable mention made by the Committee on implements. Our space will not enable us to particularize.

Grain Drills—Of these quite a number were exhibited of the most approved construction. It being impossible to test the merit of these drills by actual trial, the Committee awarded diplomas to all. Several of those exhibited were entirely new to us. The principles upon which they were constructed appeared to promise good work, but with the drill as with the plow, we require to see them in actual operation before we feel willing to pass our opinion upon them. And here we take the liberty of suggesting to those who may have the selection of Committees for the next State Fair, the propriety of appointing a separate Committee, to each particular class of implements, in order that the true value of those exhibited may be fully understood. The award of a premium to any kind of implement, by a Committee of the State Society, is a matter of no small moment, and should therefore be made only after the most careful investigation. First premium implements generally command the best sale. Purchasers are biased in their favor, and more readily admit their introduction on their farms, from the fact of their having received the premium from a body of competent judges. Hence the necessity of a greater number of Committees, and vigilant care in the awards. One of the principal objects of a State Fair, is the more general introduction to public notice, of the very best and most improved implements. To attain this object no pains should be spared, and we think, that if after the plowing match, a trial of the drills should be made, it would be the most effective method of ascertaining their true worth.

Although we can speak only in general terms of the large majority of Drills exhibited, we can particularize a few, from the fact of having seen them in use, and witnessed the result; when the grain sown by them was ready for the harvest. One of these was Moore's Patent, several of which were exhibited by different makers. The drill of this patent, manufac-

red by Messrs. Lee, Pierce & Lee, of Ercildoun, Chester County, was certainly one of the most beautifully finished implements on the ground and attracted much attention, not merely from the elegance of its finish, but the simplicity of its movements. Whenever these drills have been tried they have, we believe given satisfaction. We know of a number of farmers who use them, all of whom speak of them in the highest terms.

Custer's Drill, exhibited by Jenkins & Lamb, is also an excellent implement, and is being extensively introduced.

Pennock's Drill, has been long and favorably known, and is one of the first introduced of American invention, possessed of merit. It is a heavier implement than Moore's and more complicated, but does its work well.

IT HAVING been rumored abroad that the citizens of Harrisburg designed purchasing thirty acres of ground, erecting on it permanent fencing, shedding, &c., and donating it to the State Society upon the condition that Harrisburg be selected as the permanent place for holding the annual exhibitions of the Society, several correspondents enquire whether there is any foundation for the rumor, and if so, whether it would be expedient for the Society to accept the proposition.

In reply to the first inquiry we would state that we have heard the same rumor, and believe there is truth in it, although we cannot speak positively.

As to the propriety of permanently locating the State exhibitions at *any one particular place*, we for one cannot think it advisable, at least, not in the infancy of the Society. The propriety of holding the State fair permanently at Columbus, is a topic of discussion with our brethren of Ohio, and the editor of the *Cultivator* speaks our views on this subject so fully, and so much more clearly than we could, that we copy his arguments against the proposition, thinking them as well adapted to the climate of Pennsylvania as of Ohio. So long as there are other towns in the State, and there are several such, whose railroad facilities and accommodations are equal to those of Harrisburg, just so long there will be claimants for the exhibition. Already, several are in the field, and the number will doubtless be increased. But hear Mr. Bateham:—

"The first and principal argument advanced, is, that by having permanent grounds appropriated and fitted up for the purpose, as might be done here, a heavy item of the expenses might be saved. Second: the grounds and buildings, &c., would be more suitable and convenient than if designed merely for one occasion. Third: the officers and their assistants, clerks, police, &c., would become accustomed to their work, and their duties would be better performed; and lastly, the hotel and boarding house keepers

would make better arrangements for accommodating the crowd of visitors.

"Admitting, as we do, the importance of these considerations, we are still not prepared to give them as much weight as some do; and when compared with the arguments on the other side, they have but little weight on our mind.

"And first, it should be borne in mind that the object of the State Board, and the State Fairs, is to benefit *the State at large*—not one particular portion.—Now it is easy to see that a Fair held in any one place, is very little benefit to the farmers generally, except those residing within 50 or 60 miles around. It is true that a few of the more wealthy and enterprising will attend from more distant parts, but it is only the very *few*, while the *mass*, and those who most need the *stimulus to improvement* which such Fairs afford, are not reached or benefitted, because they have not the means or disposition to attend.—The same is true in regard to mechanics, though not quite to the same degree. This argument alone is, to our mind, of sufficient weight to counterbalance all those on the other side.

"Again, it is not only important that the people of all parts of the State should be able to witness these Fairs, but also that they should all have opportunity to exhibit their most approved stock, implements, manufactures and productions; and who that has attended such exhibitions, does not know that nearly all the agricultural part of the show comes in from not over 50 miles around? Very few farmers are willing to drive or transport cattle, sheep, swine, &c., for such purposes, even though they attend the Fair themselves. Hence if we desire to see and compare the farm stock and productions of the State at large, it must be done by holding the Fairs alternately in different parts of the State.

"Lastly, there is every reason to suppose, that these Fairs, would in a very few years become "an old story," lose their interest and fail of success, if held each year in the same location, where the same grounds and arrangements would meet the eye, and generally, the same people, animals, machinery, productions, &c., or so nearly the same, that all the novelty and zest of the occasion would be lost, and even the officers and citizens who now contribute funds, and labor so cheerfully and efficiently at a Fair without fee or reward, would soon feel it to be sore drudgery, or a tax which would only be borne by those who expected to be directly benefitted in return.

"In view of these considerations and they are the same that have always been acted upon by the New York State Society—we believe that once in three to five years it as often as the State Fair should be held at any one place; though, of course, a central locality might very properly be chosen somewhat oftener than any other. In this way we believe Fairs would conduce to the greatest good of the greatest number,

and would continue to do so for the longest time.—But if any of our readers think otherwise, and will point out the defects in our arguments, we will cheerfully give them space in our columns.

Book Notices.

THE following books have been laid on our table.—Want of space compels us to delay a more extended notice of them until our next: The United States, its power and Progress, Mrs. Bliss' Practical Receipt Book, from Lippincott, Grambo & Co., Philadelphia. Catechism of Familiar Things, Mathias' Legislative Manual, Agriculture in Schools, and Schenck's Practical Gardener, from Lindsay & Blakiston, Philadelphia. National Speaker, Greenleaf's Common School Arithmetic, Class Book of Prose and Poetry, and Greenleaf's Primary Arithmetic, from R. S. Davis & Co., Boston.

WEBSTER'S DICTIONARY, *Unabridged*.—Every man should have a Standard Dictionary of his own language, always at hand—a dictionary to which he can refer with perfect confidence. Every scholar knows the value of such a work, and every farmer should know it. Those who have never been the possessors of a work like Webster's, cannot conceive the many benefits derived from it. To the general reader, it is not only of inestimable value, but absolutely essential. There are few so well versed in the English language, that they do not occasionally meet with words, the precise meaning of which is strange to them, and the want of a good dictionary, to which to refer with the certainty of finding a satisfactory definition, is not only felt at the moment, but its effects are plainly apparent in the thousands of superficial readers met with at almost every point—readers, who, having no reliable authority to consult, are content to pass over words and remain in ignorance of the meaning. Such authority is Webster's great Dictionary—a work that has stamped a high character upon our literature, and which every American should feel proud to regard with ardent enthusiasm as one of its noblest monuments. We have used it for a number of years, and would rather part with every volume on our shelves than it. To those of our readers who have not secured a copy, we would say, do not hesitate between it and others. There is no other dictionary so complete and comprehensive, and consequently no other so valuable. See advertisement on last page of cover.

THE SNOW FLAKE, a Christmas, New Year and Birth Day Gift, for 1852. E. H. Butler & Co., Philada.

The reputation the Messrs. Butler have for years sustained as publishers of elegant annuals, is well supported in the beautiful book before us. The illustrations are, we think, superior to those of former volumes, while the contents are fully equal in point of merit. The favor the Snow Flake has received

at the hands of the public, has encouraged the publishers to put forth additional efforts to make the present number more attractive, and they have succeeded admirably. By a reference to the second page of our cover it will be seen that Messrs. Butler offer to the public many other books of the most elegant and expensive character, as well as many excellent standard School Books.

THE IRIS, an Illuminated Souvenir for 1851. Edited by John S. Hart, L. L. D., Philadelphia. Lippincott, Grambo & Co.

This beautiful Annual is unquestionably one of the most elegant ever issued from the American Press, and the enterprising publishers have surpassed themselves in the number and gorgeousness of the illustrations and the neatness of the typography. The designs which are entirely original, are printed in colors in Duvall's best style, and so happily has the artist succeeded, that they resemble paintings rather than prints. The whole of this superb volume is designed to illustrate one of the most interesting departments of American history—Indian life; the literary portion being a collection of legends and traditions woven into tales and poems by a number of distinguished writers, and the illustrations from a series of original drawings of some of the most striking and remarkable objects connected with these legends and traditions, furnished by Captain Eastman. "The Iris" is American both as to subjects and authorship, and as such commends itself to those who desire the progress of literature and the fine arts in our country. We know of no more chaste or elegant presentation book, as it deservedly ranks amongst the first of American Annuals.

THE DEW DROP, a tribute of affection. Philadelphia. Lippincott, Grambo & Co.

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THE STAR OF BETHLEHEM, or Stories for Christmas. Philadelphia. Lindsay & Blakiston.

This is a very elegant little volume, designed as a Christmas present for the young. Its appearance at once commends it to favor, and as the contents are in keeping with its title, it furnishes a most appropriate present for those whose minds should always be trained to the contemplation of subjects at once calculated to gratify and benefit. The illustrations, six in number, are very beautiful, and its general appearance highly creditable to the publishers.

THE MONTHLIES.—*Graham's Magazine* for January is a gem in all that relates to that particular class of literature to which it is devoted. The illustrations are numerous and beautiful, and if the number before us is to be regarded as a criterion by which those remaining to complete the volume are to be judged, it will require active energy on the part of its rivals to equal them. Terms \$3 per annum.

Godey's Lady's Book for January.—A superb number, abounding in elegant plain and colored illustrations, and filled with interesting contributions from some of the best pens of our country. The skill manifested by Godey in catering to the varied tastes of his many readers in by-gone years, seems not to have lost any of its power; and like that of his distinguished cotemporary Graham, his hold upon the good will of the community at large is a strong one.—Terms \$3 per annum.

Harper's Magazine for December is on our table. We always welcome this delightful monthly with unmixed satisfaction. We have little time to devote to miscellaneous reading, but whenever we have, we know of no more delightful companion than Harper. Terms \$3 per annum.

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(sept. 1851.)

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(sept-4)

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Sept 1851

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WARWICK & Co., are constantly manufacturing new and appropriate designs of enamelled, painted and Cottage Furniture, of warranted materials and workmanship. Suits of Chamber Furniture consisting of DRESSING BUREAU, BEDSTEAD, WASH-STAND, TOILET TABLE, and FOUR CANE SEAT CHAIRS, as low as \$30 per suit, and upward to \$100, gotten up in the most superb style.

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Horticultural Implements in great variety. Catalogues forwarded on post paid application.

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IMPORTANT TO FARMERS.

JESSE ROBERT'S PATENT UNITED STATES
GRAIN AND SEED FAN.

TO WHICH WAS AWARDED THE
FIRST PREMIUM.

At the Pennsylvania Agricultural Fair, after a trial the fairness of which could not be disputed. These Fans, the inventor confidently asserts, are the only ones now in use entirely adequate to the wants of the farmer. The object of the inventor was not directed alone, to the purpose of cleaning grain, but of cleaning it and saving at the same time the farmer the trouble of gathering it from the floor, thus not only avoiding labor, but keeping the grain from the dirt on the floor. In addition to this, these Fans, possess greater advantages than those constructed upon the old plan. These advantages are as follows:

First. The arrangement is such, that a quick shake can be obtained by turning slowly, thus securing when desired, a less quantity of small seeds.

Second. When necessary a slow shake can be secured, by rapid turning. This is of immense advantage, as it adapts the fan, to the cleaning of all kinds of seeds.

Third. A new method of adjusting the riddles and screws. This gives the operator the advantage of placing them in any position best adapted to accomplish the purposes of a grain Fan. Every riddle and screen has a separate adjustment, so that each one can be fixed at any angle without the necessity of taking them out.

Fourth. The grain, instead of falling on the floor, as is usually the case, is discharged, by means of a small trough, into the half bushel, or other measure that may be placed under it. By this arrangement the grain is all measured, by the time it is cleaned, thus saving not only labor, but time, and consequently expense, as well as keeping the grain from contact with the dust and dirt on floor. For this reason; the fan, can be put in operation anywhere, with as little trouble as the common fans can be used in a barn floor.

Fifth. The simplicity of their constructions renders them less liable to get out of repair than other mills.

For the above reasons, we confidently recommend our Fans to public patronage. Privileges to manufacture will be granted on reasonable terms. Satisfactory information can be promptly had by addressing *post paid*, the subscriber at Norristown, Montgomery co., Pa.

JESSE ROBERTS.

Norristown, December 1, 1851.

9-1f.

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CALYSTEGIA PUBESCENT.

This new and beautiful climber, recently introduced from China by Mr. Fortune, proves perfectly hardy in New England, having stood in the grounds here two winters without protection. Trained to a single pillar, say ten feet in height, it is very striking and beautiful object from June till cold weather, during which time it is covered with a profusion of its large double flowers of a delicate rose color. It is very ornamental planted in patches like Verbena; makes an admirable screen; and is very effective in young plantations, belts or shrubberies, trailing prettily on the surface, and running among the lower branches of the trees in a very picturesque manner. Its culture is very simple, and it will thrive in common garden soil. If required in considerable quantities the tubers may be divided into single eyes, planting each in a four inch pot of good light compost, in February, under glass, or in hot beds in the spring; or larger pieces containing several eyes may be planted in the open ground in May. Plants \$3 per dozen. Tufters for 100 plants \$3, which may be sent by mail or express, to order.

Also, every description of *Fruit and Ornamental TREES and SHRUBS*; Strawberries, Dahlias, Roses, Verbenas, Fuchsias, Chrysanthemums, &c., including every new variety of the present season.

Stocks for Nurserymen and amateurs, both fruit and ornamental of every description. Pear Seed of first rate quality.

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Carriage paid to Boston.

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At the Fair-View Nurseries Moorestown, Burlington Co., N. J.—50,000 Apple Trees, from 8 to 10 and 12 feet high, embracing about 150 Select Varieties, ripening in succession from the earliest to the latest. Also, a large quantity of Peach, Cherry, Pear, Plum, Apricot, Nectarine, Almonds, Quince, Grape Vines, etc. The Fruit Trees have principally been worked from standard trees, which leaves but little room to doubt as to the correctness of the Fruit, which has taken the premium at the Pennsylvania Horticultural Society and others for the last ten years.

50,000 Deciduous and Evergreen Ornamental Trees and Shrubs, such as Sugar and Silver Maples, American and European Mountain Ash, Lindens, Horse-Chestnuts, American Larch, of a large size, suitable for road and street planting; Balm Gileads, Norway Firs, Arborvitae, Pines of different varieties, Junipers, English and Irish Yew, Cedars of Lebanon, Double and Single Spucia, suitable for Cemeteries, Lawns and Private Yards; Borders, etc.

A liberal Discount will be allowed to persons who buy to sell again. Descriptive Catalogues furnished gratis to post-paid applicants.

JOHN PERKINS, Proprietor.

TO INVENTORS AND PATENTEES.

J. DENNIS, Jr., Practical Machinist, Manufacturer, and Draughtsman, having had twenty years' experience in building and operating machinery for manufacturing Cotton, Silk, Wool, Steam Engines, Printing Calico, &c., with several years' experience in procuring patents, tender his services to inventors to make examinations of their inventions from a rough sketch or drawing and limited description, (which may be forwarded by mail,) and compare them with the inventions in the Patent Office and give an opinion, whether the invention is patentable or not, for a fee of \$5; and save the inventor the expense of applying for a patent, which usually costs \$50, exclusive of the cost of model, as only about two-fifths of the patents applied for are granted.—His experience in making drawings of, and building and operating machinery, enables him to understand an invention from a rough drawing and limited description, and to comprehend the points in which the invention differs from those already patented, with the greatest facility. He also prepares drawings, specifications, caveats and assignments, or procures copies from, or attends to any business connected with the Patent Office. Counsellors in Patent cases can have an opinion by stating the points in their case, and arguments prepared with the proper authorities cited, to sustain the same, with despositions if necessary. He will also attend as Counsellor or Advocate in Patent causes in any Court.

Notice to 2,447 inventors whose applications were rejected in 1849 and '50, that he will examine their cases for \$5, to ascertain if the references will prevent obtaining a patent, if a proper claim is presented, and advise the applicant whether he had best withdraw or amend his papers, and get a reconsideration, or *Appeal*, or *File a Bill in Equity*. As he is the only attorney in this city, (Washington, D. C.) who has succeeded in *reversing* the Commissioner's decision by an *Appeal* to the Chief Justice.

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Trees and Plants delivered at Philadelphia, carefully packed free of charge, and despatched thence by public conveyance to any part of the Union. Orders by mail carefully attended to; catalogues furnished gratis, or may be obtained of A. M. Spangler, publisher of *Farm Journal*, in Lancaster, who will receive orders.

At our Agricultural and Horticultural Warehouse, we can also supply all kinds of improved Agricultural and Horticultural implements, also Field, Garden and Flower seeds, fresh and genuine—Country Storekeepers supplied at reduced prices with seeds, neatly put up in papers for retail sales.

PASCHALL MORRIS, & CO.

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He is, also, manufacturing all the most approved Agricultural Implements, among which he would call the attention of Farmers to a new article of Plow, of his own invention, called Cast-Steel, Extending Point, Self-Sharpening, Surface and Subsoil Plows, which for durability and ease of draft is yet unequalled.

The great advantages these Plows possess over all others, are their peculiar construction and the substitution of Cast-Steel in the place of Cast-Iron, which only wants to be seen to be appreciated; all of which will be sold on the most reasonable prices by

May, 1851.

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J. F. MEINTSH

Aug. 1, 1851.

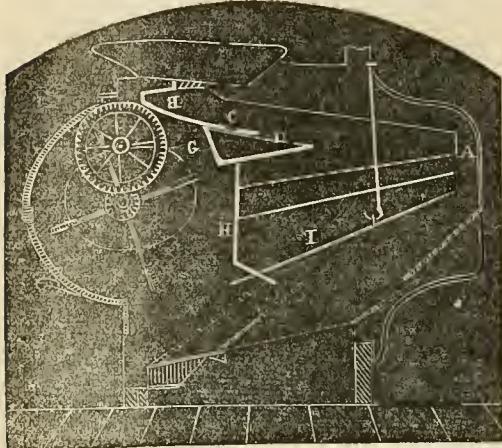
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PERUVIAN and Patagonia Guano for sale in lots to suit purchasers, by

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MONTGOMERY'S UNRIVALLED IMPROVED ROCKAWAY SCREENER.

This celebrated FAN has been thoroughly tested, and found to excel all others now in use for cleaning the different kinds of grain.

This improvement by Montgomery & Brother, consists in a double shoe—the larger shoe—A as commonly attached to winnowing machines, having grooves into which the screens, sieves or sieve boards are slid and rest.

B. The curved apron upon which the grain falls after passing through a hopper above.

C. The door which is made to extend across the curved apron B, and opening back on hinges towards the front end of shoe A, rests flat upon the front part of the apron B. The grain passes along the curved apron B and through the aperture of the door C and falls upon the screen D underneath. The apron is carried over the screen D on to the screen underneath, whilst the screenings pass through the screen D into the shoe G underneath, and are carried along the bottom of the shoe G to the centre, where a spout H receives the screenings and carries them down behind into a box below the bottom of the shoe A. The grain is carried back on to the grain board underneath perfectly screened.

The persons who have already used these GRAIN FANS have not only spoken in flattering terms of them, but prefer them to all others they have used—and very many of the best Agriculturists have given their certificates that the fact of these machines screening the grain twice by one and the same operation is the very improvement they have long desired. Our farmers will now have the most perfect winnowing machine, which spreads the grain over the upper screen more perfectly than any others now in use. This improvement is so valuable as to have induced the inventors and manufacturers to make application for Letters Patent.

All orders for the machines will be promptly attended to by the undersigned.

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Lancaster city, Pa.

Sept 1851.

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To the lot-holder who wishes to make the most of a few plants and little room, as well as to the extensive planter who wishes to arrange and cultivate his gardens in the most economical and profitable manner, the Hand Book will be found a useful companion for frequent reference.

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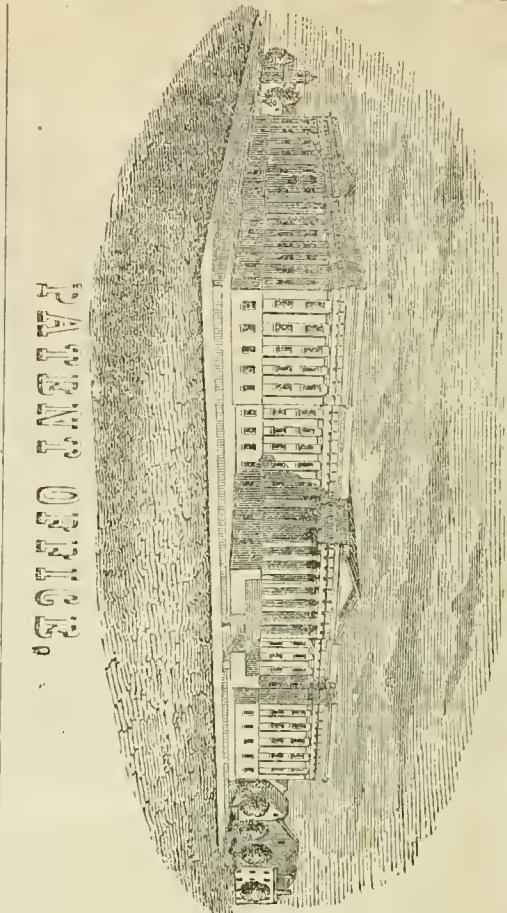
The subscriber manufactures Double-acting Lift and Force Pumps of all sizes, for Mines, Railway Water Stations, Breweries, Steamboats, Steamships, Ships, Water Boats, Family Purposes, &c.

VILLAGE AND FACTORY FIRE ENGINES. Garden Engines, Cistern Pumps, Well Pumps, for any depth required, Hose Couplings, Copper Riveted Hose of all sizes, Ornamental and Cast-iron Fountains, &c.

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Inventors and others, having business to transact at the United States Patent office, are hereby informed, that the undersigned will attend promptly to all business connected with said office, and will complete Perspective and Sectional Drawings, and all requisite papers, Caveats, Specifications, Disclaimers, Assignments, &c. and make the proper applications for the securing of Letters Patent, according to law.

MACHINISTS AND INVENTORS

will save time, trouble and expense, by first consulting him, and the strictest secrecy will be observed, relative to their inventions and claims.

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JOHN H. FRICK.
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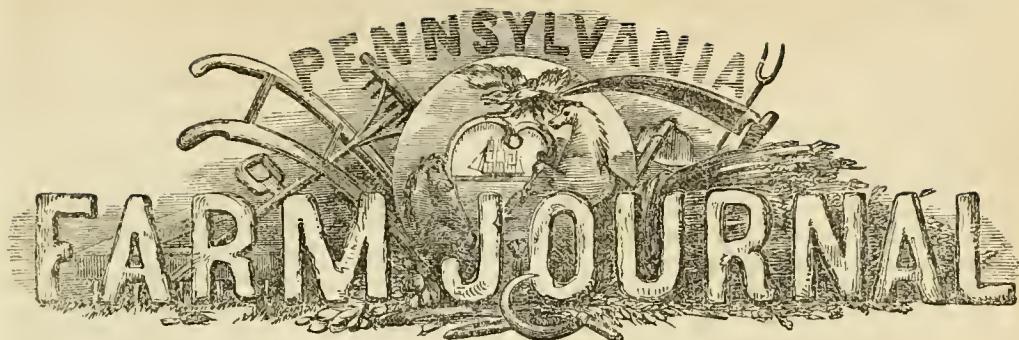
REFERENCES :

Wend, Abbott & Co.,
Truitt, Brother & Co., } Philadelphia.
Coates & Brown, } Agents:

JOHN ZIMMERMAN, Lancaster Pa.
CHARLES F. FRICK, Reading, Pa.
SAMUEL H. TAYLOR, M'neb Chunk, Pa.

DR. JOHN G. SCOVEN, Veterinary Surgeon,
May, 1851.) Examiner for Lancaster County.

W. B. WILEY, Job Printer, Lancaster, Pa.



PENNSYLVANIA FARM JOURNAL

VOL. 1.

LANCASTER, PA., FEBRUARY, 1852.

NO. 11.

THE FARM JOURNAL.

S. S. HALDEMAN, Editor.

Agricultural Education.

Although discussions on agricultural education have occupied a good deal of space in the *Farm Journal*, the subject has not received more attention than it deserves. Our own views are given to a certain extent in our notice of Mr. Russell's plan for an Agricultural College, on page 59, to which we refer our readers, as well as to the essays of our correspondents upon the same subject.

Agriculture being more important than all other branches of industry combined, its good or bad condition must affect the welfare of the country in a greater degree than the fluctuations of any other industrial pursuit. It is therefore important that a knowledge of its principles should be taught as systematically and as fully as in Law or Medicine.

When those who are interested directly or indirectly in the cultivation of the soils are disposed to give their sons a liberal education they have no resource but to send them to institutions where more attention is paid to literature and the studies required by professional students, than to science; and as a result, the farmer's son soon acquires a distaste for the pursuits of his father, and fancies he may have a genius for becoming a lawyer, doctor, or retailer of merchandise. This accounts for the number of professional men and retailers which swarm in every town of any size.

This evil would be lessened if agricultural colleges were established, in which this and collateral branches of science would be taught. Let agriculture be understood as a science, and it takes rank as a profession, with all the dignity which professional pursuits acquire, from the extent to which they give employment to the reasoning faculties.

A college of this kind would be adapted in a great degree to the higher educational wants of the coun-

try; and as it would be frequented by many students who wish to have a more practical education than they can get in exclusively literary institutions, these would be compelled to modify or extend their course of instruction. The result would be a rise in the general standard of education, so that agricultural colleges would be the final triumph of our educational system.

The information disseminated by these institutions would have a tendency to advance the general standard of education, and its influence would be very beneficial, even in the case of those students who would not become practical agriculturists after completing their course; as they would be able to discuss and explain the various subjects which are continually presenting themselves in an agricultural community.

There are materials enough within reach to enable a legislative committee to decide upon the extent and organization of an institution of this kind so that it need not be discussed here; but devoted as we are to the great farming interest, we call the attention of our legislators to this most important subject, with the hope that it will be acted upon at the earliest possible period.

The employment of agricultural lecturers to traverse the State, has been proposed; but this would not be sufficiently practical; and it would be very difficult to collect audiences among a population which is necessarily thinly distributed.

MICE IN BARNs.—A writer in the *Rural New Yorker*, who has suffered greatly by these pests to the farmer, states that he has found that hay-mows having spearmint in them, were free from rats and mice while others, in the same barn, having none of this herb scattered about, were nearly destroyed by them. Other experienced farmers concur in the opinion that spearmint is a complete antidote against their operations. This is an easily tried remedy, and our farmers, suffering from the same cause, are recommended to apply it.

Communications.

For the Farm Journal.

Guano.

As this subject has not occupied much space in the Farm Journal, and indeed some experiments have been detailed rather discouraging and unfavorable to its use, it may be well to examine the matter a little and a few remarks are here offered more with a view to *elicit* than to convey information.

The farmers of this State have, perhaps, made less use of it than in adjoining States, probably more from want of appreciation of its value, than that the increase of their crops and the value of their land would not have been promoted. It is inconceivable that a manure, which has restored and made productive and quadrupled in value many of the worn out farms in Virginia, Maryland and Delaware, and in every other State where it has been tried, a largely increased quantity is annually demanded, should not be very valuable to the farmers of Pennsylvania. In Great Britain, the amount imported last year was over 160,000 tons, being a steady increase, excepting in one year, since 1841.

In regard to the use of lime, some of our Chester county farmers when asked as to the best method of applying it, whether fresh from the kiln, or after it has again become a carbonate; whether in spring or fall; on sod or mellow ground; have replied, that the main thing is to get it *on*. Now this getting it on, does not seem, from all accounts, to be *all* that is necessary with respect to guano, for its active principle, volatile salts, may easily *get off*, and pass away into the atmosphere and be lost.

What general rules must be observed in the application or preparation of guano?

Under what circumstances of the atmosphere, or season of the year, is its efficiency most promoted?

Is there any important difference in the qualities of guano?

To what crops is it most serviceable, or is it equally beneficial to all?

How and in what quantities should it be applied?

These are questions in which every reader of the Farm Journal is interested, and it is hoped that those who have experimented with it, will be willing to contribute their experience. In the vicinity of West Chester are about the best farms and farmers in Pennsylvania. Where over one hundred bushels of corn has been raised to the acre without manure, forty to fifty of wheat, eighty and ninety of oats, it might well be thought guano was not badly needed, and accordingly very little has been used, till the present fall, when we have supplied from our agricultural warehouse a considerable quantity of the genuine Peruvian article for the wheat crop, and shall be able by another season to speak of its effect as compared with barn yard manure for wheat, on good soils.

1st. As regards the general rules for its application. It is mostly conceded that it ought to be plowed in, immediately after sowing and neither left on the surface or merely harrowed in, otherwise the highly volatile carbonate of ammonia, the active principle of good guano is dissipated and in a measure lost.—There have been instances where it was sown in the bottom of a deep furrow, and stirred in afterwards with the subsoil plow, and the benefit felt for several croppings. There is probably more danger of its being covered too shallow than too deep. A good plan doubtless is, to prepare it some time before using, by mixing it with plaster, say one part of plaster to three of guano. The sulphuric acid of the plaster having a greater affinity for ammonia than for lime, unites with it, making a sulphate of ammonia, which is not volatile, and is soluble in water, a permanent manure thus being produced. The use of plaster with guano, would probably reconcile the conflicting statements about its durability.

In respect to the season of the year to apply it. I would recommend the fall by all means, either for winter or spring crops. Plow it in deep in the fall, so as to be dissolved and incorporated through the soil by the rain and snows of winter, and to be ready for immediate action on the roots of growing crops. If that is impossible let it be applied broad-cast immediately before or at the time of rain. It has been observed that the effect of guano, as of plaster, was not so perceptible in a very dry season.

As to the different kinds of guano in the market, careful analysis has settled the question, that its value consists in its containing *chiefly* ammoniacal salts, phosphate of lime, with some animal matter, and the proportions of these determine the quality. An analysis of Peruvian, Chilian and African resulted as follows:

	Peruvian.	Chilian.	African.
Ammoniacal salts,	33 to 40 pr. ct.	12 pr. ct.	23 to 28 pr. ct.
Animal matter,	5 to 7	3	5 to 9
Salts of potash & soda,	8 to 12	8	9 to 11
Mag. & com. of lime,	23 to 28	53	30 to 37
Water,	10 to 13	22	18 to 25

Peruvian guano commands the highest price in the market, and is most to be relied on, as is shown by the above.

The "prepared and improved guanos," so much extolled by the manufacturers, should be entirely discarded. There is no doubt about their being "prepared," but very much about their being "improved." The preparation may consist of about ninety per cent. of soil, with a pinch of bonedust, and charcoal for a coloring matter. Those who are resolved on purchasing these nostrums, should insist, where so much soil is used, that it, at least, should be of a fair quality.

In respect to the kinds of crops, where it may be used. The experience of the country seems to show, as its constituent principles would also demonstrate, that it is applicable to every kind of field and garden crops, fruits, flowers and vegetables. An eminent

chemist, of Massachusetts, says, "it comes nearer to an universal compost, than any other manure known." It has one very great advantage over barn yard manure in containing no detrimental seeds. The expense of heavy hauling is also a great saving.

Three hundred pounds to the acre is considered a good application for ordinary cropping. Seven hundred pounds has been found injurious. For rich culture, a proper medium would be five hundred pounds.—Injury has resulted from its coming in contact with seeds, when applied to the hills or rows. It should be first covered with soil before dropping them.

It is to be hoped, the result of experiments with guano, for different crops, under various circumstances may soon be reported for the Farm Journal.

PASCHALL MORRIS.

West Chester, 1 mo. 10. 1852.

For the Farm Journal.

Draining.

MR. EDITOR:—In my last communication, I stated that the greater part of the land I had purchased was considered worthless, and wholly unfit for winter grain, corn or grass, being springy or what is generally termed spouty. In reconnoitering the land before I purchased, I found it stony on the top, but not so at the depth of a few inches. As it inclined to the south, and being generally intersected by a strata of stiff clay, I felt assured it would be in my power to convert it into good arable soil. Spouty land, it is well known, contains in the spring, a superabundance of water, the springs approaching near the surface. The water, on inclining ground will find its way without disturbing the surface, where the soil is gravelly or porous limestone, but where it meets a strata of stiff clay, it cannot penetrate it, and is consequently forced to the surface, and finds egress at every possible opening, conveying the impression that the land abounds in springs, when in fact there is but one. To ascertain the location of the main spring, it is only necessary to mark, in wet weather the different places where the water is forced out.—When the dry season arrives, and the water sinks gradually away, that spot where the temperature of the water is coldest, is the seat of the principal spring.

I commenced operations, by digging, at the foot of the declivity, a ditch, three feet in depth and two feet wide at the bottom, increasing the width to four feet at the surface, and three hundred and twenty cubic yards long. From that ditch I started what is called French drains, in different directions, to break through the stiff clay towards the main springs, the whereabouts of which I had previously ascertained. The French drains, were dug two feet wide at the top and bottom, and two feet deep, then filled with stones, to leave an opening of about two inches wide, that the water might have a free passage to escape. I then

covered the stones with leaves or long straw, and filled the trench again with the excavated ground. The leaves or straw were so laid as to prevent the earth from falling through the stones and filling up the passage for the water. In this way I have made 750 yards of drains, all emptying into the ditch at the foot of the hill, and by this means have effectually drained nine main springs.

For the benefit of those who are disposed to regard draining as too formidable an undertaking, I annex below a statement of expenses.

320 cubic yards of ditch at 12 cts. per yard, \$ 38 40	
750 yards, digging, laying the stones and filling up again, 6 cts. per yard, running measure,	45 00
The gathering of the stones, hauling them, to the drain, which was done by my hired man with a horse and cart, having the double advantage of clearing the land of stones and applying them to a good and profitable use,	16 60

16 60

§100 00

By this operation, I have reclaimed thirty-six acres of land at an expense of one hundred dollars, within twenty miles of a good market (Pottsville), and by liming and good management, it now produces from twenty to twenty-five bushels of good wheat, forty to forty-five bushels of corn, forty to fifty bushels of oats or one and a half to two tons of clover or timothy hay per acre.

Many of our farmers are selling off their property and moving to the west, leaving the homes of their youth and the graves of their fathers, to begin a new life in the wilderness, while thousands of acres of land in Pennsylvania, can be reclaimed as easily as mine has been, and with as great market conveniences.

Is not this subject worthy consideration. The advantages of draining only require to be understood to be adopted, and it has been with the hope of inducing others to take hold of their pens in support of it, that I trouble you with the above.

H. SNUBERT.

Bethel, Berks co., Pa.

For the Farm Journal.

Influence of the Moon.

In a spirited and sensible article upon this subject, published in your last number, some good arguments are given by Mr. Taggart against the popular belief in lunar influence, as capable of producing changes of weather and affecting the durability of wood, germination of seeds, preservation of fruit, meats, &c. It is one thing to assert disbelief in the existence of such an agency, and quite another, to demonstrate its fallacy. Perhaps one of the strongest demonstrations of the incapacity of the moon to effect changes in the weather, is to be found in the rich pages of the Farmer's Encyclopedia, a work which should be within the reach of every one anxious to be posted

up in the best information relative to rural affairs, and all matters connected with practical farming.

The author of the article referred to observes, that the well known influence exerted by the moon in causing the tides, has tended to keep the idea of the extension of her power in the production of other physical phenomena, including the ordinary changes of the weather. But the agency which gives rise to the tidal wave, is purely one of gravitation, whilst that governing the changing conditions of the atmosphere, connected with wet and dry weather, is mainly temperature. Watery vapor owes its suspension in the atmosphere entirely to heat, deprived of which through any means, it becomes condensed, giving rise to clouds, rain, and other aqueous precipitations. The question of wet or dry weather, is therefore one of temperature alone, with which the moon has nothing to do, the only agency exerted by her being limited to the power of gravitation. It is by thus drawing the proper distinction between two mighty agents operating in the production of natural phenomena, namely gravitation and temperature, that we are enabled to understand, why the moon may influence the affairs of our planet in one way, and yet have no power to control the states of the weather.

After referring to the supposed agencies exerted by the moon upon animal substances, vegetable growth, &c., and giving rational and very interesting explanations of them, the article concludes with the following statement of principles regarded as demonstrated:

1st. Wet and dry weather, are matters regulated solely by changes of *temperature*, over which the moon has no control:

2d. The mutual influence exerted between the earth and moon, as shown in the ocean and atmospheric tides, depends upon the play of another and entirely distinct principle, namely *gravitation* or *attraction*.

3d. Most, if not all the effects upon animal and vegetable substances, popularly ascribed to the action of the moon, are to be traced to natural agencies, entirely independent of this satellite.

Notwithstanding our skepticism in regard to the supposed influence exerted by the moon at certain of her so-called changes,—for, as Mr. Taggart has truly remarked, real changes she has none,—still we cannot help thinking, that many who have been led by their credulity to a strict observance of lunar changes received benefits from so doing, simply because they were impelled to greater exactness in making those preparations, upon which success generally depends.

FRANKLIN.

INK POWDER FOR IMMEDIATE USE.—Reduce to powder ten ounces of gall nuts, three ounces green copperas, two ounces each of powdered alum and gum arabic. Put a little of this mixture into white wine and it will be fit for immediate use.

For the Farm Journal.

Agricultural Nuisances, No. 6.

WILD CARROT. BIRD'S NEST.

French Carota. German Die Mohre. Spanish Zanahoria.

Daucus carota, Linn. D. sylvestris, Mill. D. vulgaris, Neck. Caucaulis carota, Roth. Pastinaca sylvestris, Gerard.

Dankos is the ancient Greek name of the carrot.

It belongs to the 5th class *Pentandria*, and 2d order *Digynia* in the Artificial System of Linnæus. It belongs to the natural order *Umbellifera*, and tribe *Danicinae* in the Flora of North America.

Between forty and fifty species of the genus are known; one of these found in the Southern States, and one which is thought to be only a variety of the Southern one, is found west of the Rocky Mountains.

The one under consideration is a native of the East, and has long been under cultivation, and in this situation presents several strongly marked varieties. The wild carrot is the common cultivated one in a wild condition. It is only when it escapes from cultivation and degenerates into a useless weed that it becomes a nuisance. I have seen whole districts covered with it, choking out almost every other species of vegetation, and although only a biennial, when it thus takes the field, it is extremely difficult to be defeated, being a great producer of seeds, like the mullen, rag weed, and cheat, it springs up whenever the conditions by which it is surrounded prove favorable for its germination.

It grows from two to four feet high, erect, round, furrowed, hairy, and branched; the leaves below are large, all cut winged and gnashed; those on the stalk gradually smaller toward the top, all cut and hairy.

The flowers are on long footstalks, disposed in the form of the braces of an umbrella, which when in flower, form a flat surface on the top, but when the fruit begins to ripen, they draw together in the middle, and often present somewhat the appearance of a bird's nest, whence one of its common names.

The flowers are white or yellowish; the fruit is egg shaped and partially covered with bristle-like hairs, they have a light aromatic smell and a warm acrid taste.

The roots of the wild carrot are frequently given to children as a vermifuge. The expressed juice is used in calculus complaints, and for the sore mouths of infants, and a poultice of the scraped carrot is first on the list among our domestic remedies, to abate pain and remove the stench of foul ulcers.

When under proper cultivation it becomes one of the most important vegetables. They are raised in Europe in prodigious quantities; the white Belgian produces sometimes thirty tons to the acre. They are used extensively mixed with flour to make bread. Horses and all kinds of stock are fond of them, and the butter made from cows fed on them, is of the finest quality. One hundred bushels of carrots contain as much nutriment as one ton of hay. They are said to contain fourteen per cent. of casein and starch.

The carrot has been found to be very productive in this country. In an article in the Farmer's Monthly Visitor, dated Concord, Nov. 7th, 1845, it is stated that 304½ bushels were raised on one-fourth of an acre.

In the Genesee Farmer, for January, 1846, it is stated 410 bushels were raised on one-fourth of an acre, which would be equal to 1640 bushels on one acre, equivalent to almost 16½ tons of hay. 1000 bushels are frequently raised on an acre, which from the fact that it is one of the hardiest of the root crop and at the same time possessing so many valuable qualities, must sooner or later recommend its cultivation more general and extensive.

J. M. M'MINN.

Unionville, Jan. 9, 1852.

Translated for Farm Journal.

Agricultural Chemistry, No. 6.

The last combination of oxygen, which we shall notice, is that with manganese, the *protoxyd* and the *peroxyd of manganese*. These are closely related to the protoxyd and peroxyd of iron, and their properties are nearly the same. Almost all soils, and many plants, contain a small portion of one or the other of these oxyds.

Not oxygen only, but nitrogen also, forms combinations with other substances. Among these of special importance to the farmer, is the combination of nitrogen and hydrogen, forming *ammonia*—which acts so important a part in vegetable economy. Ammonia consists of four parts nitrogen and one part hydrogen. It belongs to the class of basic salts, as it reacts with acids in the same manner as potash, soda, &c. Ammonia never occurs free, but always in combination with hydrochloric acid, as salammoniac. It is formed likewise in the process of putrefaction and decay, and by the dry distillation of nitrogenous organic substances. It appears also in the exhalations of certain animals and plants, and is produced in all the processes of oxidation which take place under the simultaneous influence of air and water.—To procure ammonia as a gas, salammoniac and fresh burnt lime are mixed and heated in a retort. The caustic lime unites with the chlorine forming chloride of calcium, and the ammonia is given off as a gas,

which is collected in a receiver over mercury. For the production of *aqua ammonia* “Woulffie's apparatus” (fig. 15,) is employed. Ammonia has a strong affinity for water. With the acids it forms salts, which are readily soluble, and when not present in excess, exert a very favorable influence on vegetation. Ammonia, whether pure or mixed with water, is exceedingly volatile, and hence is constantly escaping from dung heaps and manure pits. But when combined with an acid, it loses its volatility, and unless again decomposed will remain unchanged and unwasted in the soil. Various other substances, such as alumina, also possess the power of absorbing and retaining ammonia. The ammonia in manure may be fixed by strewing earth or gypsum over it; or by adding sulphuric acid to the urine and occasionally pouring the mixture over the manure heap. As cultivated soils always contain more or less decaying organic matter, this constantly furnishes opportunity for the formation of ammonia, and hence scarcely any soil is found to be wholly destitute of it. Ammonia is very readily decomposed into its chief elements, by growing plants; and as plants require large quantities of nitrogen and hydrogen for their sustenance, it is evident how beneficial to them must be the presence of ammonia in the soil. The excess of ammonia beyond what can be taken up by the acid present, frequently causes horse manure, when recent, to destroy or *burn up* vegetation if applied in dry weather on poor sandy soils. Horse manure, from its very nature, produces an abundance of ammonia; and consequently requires, during its decomposition, a large amount of acid to neutralize or fix the ammonia. But, on sandy soils and in dry weather, the requisite quantity of acid is not supplied, and thus the ammonia acts destructively as a caustic.—A similar result follows the application of other manures in a fresh or rank state. Fresh urine also acts thus destructively on vegetation: but this can readily be prevented by mixing sulphuric acid with such urine till effervescence ceases to take place. In addition to what they receive from the soil, plants likewise absorb ammonia from the atmosphere. Ammonia, as has been stated before, readily combines with all acids. One such combination is the *carbonate of ammonia*, which plants eagerly take up, and which is rapidly produced when warm and damp weather favor and promote the decomposition of organic substances. The carbonate of ammonia, when abundant in the soil, causes the cereals especially to shoot up suddenly, with weak spindly stems, having a tendency to *lodge*, and producing small, imperfect grain. In such cases the formation of carbonic acid and ammonia is predominant, and the decomposition of the more earthy substances is retarded or prevented.

The *sulphate of ammonia* has already been adverted to, when speaking of gypsum. It is a resulting

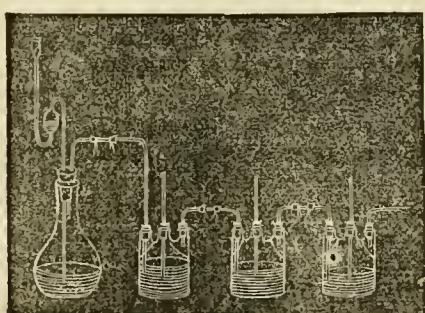


Fig. 15.

product in the manufacture of gas from bituminous coal, and where it can be procured at a low price, may be usefully employed by the farmer. If applied to soils containing much carbonate of lime and magnesia, it will speedily be decomposed, producing gypsum, sulphate of magnesia, &c. which cannot but prove beneficial to the soil. The *muriate of ammonia* and *ammoniac*, as also the *nitrate of ammonia*, are excellent fertilizers; but as the application of them would be too expensive for practical use, we shall pass them by without further notice. Of much greater importance and value, on the other hand, is the *phosphate of ammonia*, which is introduced into the soil by urine, and supplies it with two substances very essential to vegetation—phosphorus and nitrogen. It is therefore the more to be regretted that the use of the pure salt is attended with too great expense to be at all admissible in practical farming. The phosphate of ammonia contained in urine, undergoes decomposition, as soon as it meets with the carbonates of lime or magnesia in the soil, or with the protoxyds or peroxyds of iron or manganese;—the phosphoric acid parting from the ammonia, and uniting with one of these bases. And since all soils contain at least one of these substances, and the phosphates influence plants mainly by means of the phosphoric acid they contain, it makes very little difference whether we employ phosphate of lime or phosphate of ammonia, as manure; for, though phosphate of lime be insoluble in water, it is soluble in humic acid, which is found in all cultivated soils.

Another combination interesting to the farmer, is that of hydrogen with chlorine, forming *hydrochloric* or *muriatic acid*. This acid is procured by pouring dilute sulphuric acid on common salt, in a retort, and collecting the gas evolved, in the pneumatic trough over mercury. Muriatic acid in combination with soda forms common salt. It has all the properties of an acid, yet but slightly promotes vegetation, because plants in general require very little chlorine. Pure salt acts on plants only by means of the soda it contains, and must be applied in small quantity only, not to be injurious.

In conclusion we shall notice the substance termed *humus*. Formerly it was thought that plants grew and became developed only by absorbing, through their roots, an aqueous solution of humus, and digesting or assimilating it. Subsequently humus was subjected to a more rigid examination, and was found to contain several combinations of oxygen. The first and more common of these was called *humic acid*, and was regarded as the proper pabulum or nutrient of plants. The still more recent investigations of Liebig, however, have shown that this humic acid is not destined to enter plants in that form. According to Liebig's views, humus and humic acid have no direct agency in nourishing plants, but humus is merely intended to be gradually acted on by

the oxygen of the atmosphere, decomposed and converted into carbonic acid; which is then absorbed, as a gas, by the plants, and decomposed into its elements, carbon and oxygen. The carbon is appropriated and assimilated by the plants, but the oxygen is, in the main, again returned into the atmosphere. Humus consists of the remains of pre-existing plants and animals, decomposed by putrefaction and decay, but which have not yet become combined with the oxygen of the atmosphere, nor commenced a new career of circulation as carbonic acid. As many accidental causes may concur to prevent the perfect decomposition of these remains in the soil, so also the humus itself may be more or less decomposable. Some kinds have in a greater or less degree assumed the form and character of mineral coal or carbonaceous matter, and from this cause offer more protracted resistance to the action of oxygen, and are besides less soluble in this state than other kinds are. This has been denominated *carbonized humus*, and constitutes the principal portion of the black, friable and turf soils. Another species of humus has become combined with an acid, acetic acid, for instance, and thus resists further decomposition. This is the *acid humus*. On the contrary, that kind of humus which is readily susceptible of decomposition by oxygen, is called *mild humus*, whilst *humic acid* is that form of humus which already contains a greater proportion of oxygen, though still not enough to enable it to assume a gaseous state as carbonic acid. Wherever much soluble humus exists, there much carbonic acid must be formed and plants are supplied plentifully with nutrient. Now, since humus has originated from the decomposition of vegetable and animal remains, and these do not consist of carbonaceous matter exclusively, but also of hydrogen, nitrogen, sulphur, phosphorus, potash, &c., the source of the efficiency of humus in supporting vegetable life is sufficiently obvious.—Superadded to this is the fact, that nearly all those substances are present in a soluble state, and can therefore the more readily be absorbed and assimilated by plants. Another favorable effect of humus is that it serves to keep the soil loose and porous, thus enabling the roots of plants to penetrate it with ease in all directions, and allowing the oxygen of the atmosphere to enter and penetrate it—thus facilitating decomposition and the preparation of aliment for future crops. Yet none of these advantages would result from even an increased abundance of humus, if that substance did not possess the property of absorbing a very large amount of moisture from the atmosphere, and retaining it; so that a soil containing much humus, will also retain moisture much longer than any other. During the decomposition of humus several kinds of acids may be produced, which, if not sufficiently concentrated, will arrest or retard its thorough decomposition or transformation. When this is the case the humus becomes acid and unfitted to sup-

port vegetation. Marshy or boggy soils generally contain much acid humus. The excess of acid in them may be detected by boiling an ounce or two of the soil in rain water, and dipping litmus paper in the solution. If this turn red, there is an excess of acid in the soil. Soils rendered infertile by acid humus, may be reclaimed by a dressing of carbonate of lime or wood ashes, which will combine with the acid and form a neutral salt.

It is, however, not sufficient that the farmer possess a knowledge of the different substances which have been enumerated. He must also know which of them are most requisite or essential to the growth of plants; which of them are supplied by the soil, and which of them are derived from the atmosphere; as also, what means are to be used to furnish plants at all times with their necessary aliment. This leads us, in the next place, to the consideration of the nourishment of plants. Plants develop themselves and grow by receiving their aliment in part from the soil and in part from the air. From the soil they receive carbonic acid combined with oxyds, and ammonia combined with acids, in so far as these salts are soluble in water. With water they receive also those incombustible substances which are not presented to them in a gaseous form, but which occur only in the soil and being dissolved by water are thus furnished to the plants—such as silicic acid, potash, soda, magnesia, lime, phosphorus, sulphur, iron and manganese. These substances are taken up partly in combination with carbonic acid, and in part they are converted into salts by the acids generated in consequence of the excess of oxygen or chlorine. From the air plants derive oxygen, but chiefly carbonic acid and ammonia, and the extremely minutely divided particles or atoms of substances originally not volatile. All these are appropriated and assimilated by plants according to their natural affinities or propensities, so that one receives more of one particular substance and another of another. Even the several parts of the same plant require for their proper developement more of one substance than of another. Thus, the stem or stalk of a cereal plant contains much silicic acid, while a greater proportion of phosphorus, or sulphur, or nitrogen is found in the seed or grain. Other plants again contain more carbon, or lime, or carbonic acid, or nitrogen, or oxygen, &c. On this difference in the requirements and constituents of plants is based the theory or system of a *rotation of crops*. But there is another chief difference in the constituent elements of plants to which we must pay attention, and which is of the utmost importance. If a vegetable be burned, or a plant or animal die and decay, a portion of its component ingredients passes off invisibly into the air in a gaseous form. These are those elements of plants and animals, which originally consisted of gaseous substances and which now reserve their original form. These

elements are likewise, in the main, supplied to plants from the atmosphere; and are, as it were, condensed or solidified in them, subsequently to resume again their native gaseous form. These substances are termed volatile or combustible. But after the incineration or decay of plants or animals, there remain as ashes, certain other substances which were originally derived from the soil. These are the non-volatile, indestructible or incombustible substances—the earths, the metals, phosphorus, and sulphur, &c.—These remains are usually called *ashes*. The relative quantities of combustible and incombustible matter which plants contain is always in proportion to the quantity of aliment derived by them from the atmosphere or the soil respectively. To the farmer the indestructible or incombustible elements of plants are the more important, because the gaseous elements can be, and in most instances are supplied by the atmosphere. Plants cannot themselves produce those elements, but must find them already prepared for their use, if they are to thrive vigorously. Now the preparation of these necessary alimentary substances is almost constantly going on in the soil and in the air; and the farmer has for the most part only to take measures that the requisite quantities are supplied to the crops in due season. He must also know which and how much of the several substances they need, because otherwise he may make a wasteful or injurious application of his materials. Furthermore, the difference between the amount of combustible and incombustible matters contained by a plant deserves to be noted. As but a small proportional quantity of ashes remains after incineration, it is manifest that plants require for their growth a much larger quantity of gaseous or aëroform, than of solid substances. Nor is the fact unimportant, practically, that plants, in order to thrive, require that the alimentary substances they need should be present or be presented in certain relative quantities. An excess of one in proportion to another may frequently arrest growth and developement altogether. The incombustible elements are more apt to be present in excess than the other, because a very small quantity of them is usually needed, and an over-supply may consequently the more readily occur; and if one of these substances be much more soluble than the rest, it may easily cause the destruction of the plants. But it not unfrequently happens, also, that there is an entire absence or want of some particular substance; which must then be supplied, unless, as is sometimes the case, the plants have it in their power to substitute other substances in lieu of it. It is likewise an ascertained fact that different plants possess in very different degrees the power of assimilating nutriment; and this difference is found to obtain even in different varieties of the same species of plants. It probably results from or depends on the greater or smaller degree of vegetative power with which each particular

plant is naturally endowed. The farmer may turn this fact to account, by cultivating plants possessing the higher degree of vegetative power, in soils which do not part with their nutritious matters as readily as others; while his richer soils are allotted to those plants which possess a mere feeble vegetative power.

For the Farm Journal.

Agricultural Education--Change of Seed, &c.

MR. EDITOR:—Permit me to congratulate you upon the indications that the *Farm Journal* is about to become the “hand-book” of Pennsylvania farmers. To give the most profitable effect to agricultural essays they should be made up of thought, observation and experience gathered in the midst of their readers.—Foreign facts are always more or less weakened in their influences, by the suspicion, at least, that they are surrounded by untold or unexplained circumstances. With regard to this peculiar subject, there is reason, then, why a farmer should read the productions which emanate from kindred thought and action. Zealots in agriculture could not fail to be pleased with the practical character of your January number. “The importance of Agricultural Education,” which graces its first pages, I trust may make its impression upon many readers. If the farmer, unlearned himself, would but be convinced, how much pleasure and happiness he has it in his power to bestow upon the whole future life of his children;—if he would but believe that his heavy hand is constantly pressing upon the germ of intellect, buried in the mind of his own offspring, which only wants an opportunity and his aid to enable it to spring into liberty, and light, and life;—if he would, in his imagination, but follow his untaught boy as he follows the plow, and through the medium of his unenlightened countenance enquire the subject of his thought, and find it to be but a single grade above that of the animal he drives; if his heart did not sink within him it would be because he had no heart for grief. But if, on the contrary, he found there a countenance brightened by it: own thought—a pursuit of labor made easy by the intellectual hope that that his observations and discoveries were adding something to the stock of knowledge—if when surrounding the evening fire, he had the advantage of a mind which constantly recurred to its own resources, which brought home its own reflections upon its own observations, that was always adding something new to the ear of a willing hearer, there would be a pleasure in this which may be better imagined than described. And this is “the importance of Agricultural Education.”

In my practical operations on the farm, I have made it a rule to doubt all *dogmas*. That theory for which no reason has been assigned, and none can be imagined, should be suspected, at least. The article “on change of Seed” deserves attention, the more so because it is from the pen of one so able to bring the

light of philosophy to the aid of practical experience. It has become almost a self-evident truth, with farmers, that seed should be changed, but with us the change is not only of the seed, but from sandy or slate land to limestone land; and *vice versa*. It is not to be denied that profitable results have been attained by this change; the experience of very many attest the fact. “My observation is decidedly against it.” And in my judgment, the experience of others on this point is found in the fact, that he who goes from home after seed, goes after *good* seed, better than his own. But if there be any thing true in nature, it is, “none but the best and most perfect should be used for the re-production of its kind.” How procure it? To prepare fifty bushels of seed, take seventy five, and blow it down to the required quantity, then wash it in water made slightly salt, partially dry it, and to make it feed regularly in the drill, mix a little plaster-paris with it and run it fast through the rolling screen. The product of seed thus prepared will afford your neighbors additional proof of the advantage of going abroad after good seed. The difference will be as great as the effect of feed upon a well-groomed horse, and one never touched by a brush or curry-comb. But it is said “this takes so much trouble and labor,”—so it does, and we rejoin:—it is labor most profitably spent.

In reply to a query put by the writer, I reply that it is never deemed judicious to sow old seed when you have new wheat of good quality. Old wheat does not exhibit the evidence of want of vitality. It may have been heated, and its germinating power thereby destroyed, and this the eye cannot discover. But new wheat, prepared as I have suggested, never wants vitality, and is ready to spring into life as soon as committed to the soil.

Elton’s “Small Potatoes vs. Large Potatoes for seed,” is another illustration of the value of good seed; and it would have been just as forcible without the reason that small potatoes are sometimes of the second growth.

In the article on “Wheat Culture” your compositor has made me to say that wheat may be sowed at any time “before” the first of September—instead of *after* that period.

FRED’K. WATTS.

Carlisle, 24th January, 1852.

For the Farm Journal.

Practical Experience---Protection for Trees against Mice.

MR. EDITOR:—Dear Sir—I have received your Journal from its commencement. I also receive several of the leading Agricultural Publications of the country, and I think the “Farm Journal” is behind none in *Practical* and *Scientific* instruction. If every cultivator of the soil in the State of Pennsylvania would subscribe for your Journal, and then read and follow its teachings as far as they may be applicable to their particular situations, not being afraid

of that *bug-bear* called *Book-farming*, but willing to learn from the Practical experience of others, even if it should be found recorded in a Book—I am confident they could not expend a dollar to better advantage.

If each of your readers would furnish you a page of their experience, from time to time, in the management of their farms, stock, &c., I am sure it would assist you very much in your efforts to furnish them a useful and interesting Journal. As making a beginning, I have a mind to give you my method of protecting fruit trees from being girdled by mice. Some of your readers that may be so fortunate as not to be troubled with them, may think it a small subject to write about, but I can assure you that in this part of the country, they are not to be overlooked. If they were, in the spring we would discover that the mice had not overlooked our Apple-trees.

I procure sheet lead, the lining of old tea chests, cut in strips of from ten to fifteen inches in length, and of a width to just go around the tree, lapping it an inch or two, securing it with a bit of twine. I have found effectual.

Last winter I had my trees banked up as usual, but a heavy fall of snow occurring, I was fearful the mice might be at work at my young trees. Three or four days after, as soon as the weather cleared up I sent my man to examine the trees in a young orchard of fifty trees. He found seven quite badly barked. We then procured some lead and had it put on, which prevented further loss.

As to the expences, twenty-five cents will buy lead enough for fifty trees, and the trouble cannot be more than to bank them. Mr. Editor, if you think this way will be new to any of your subscribers, you can tell them of it. There is, undoubtedly other ways of securing the same object, which may be equally good; but in one case I heard of the experiment of coating the tree with tar, which proved very injurious.

Yours truly, II.

Fort Plain, New York.

Pruning Trees.

SELECTED AND ALTERED BY R. BUIST, JR.

At this leisure season of the year when the farmer has time to look over his grounds and trees it may be asked what is pruning? This is a question which has been little attended to. There are two operations on trees, very different in their principles and results, both of which usually pass under that name. The most common, which may more properly be termed "lopping," is the rude practice of cutting off branches large and small indiscriminately, to increase the length of the stem, or as is supposed the growth of the tree; the other, which is properly "pruning," is the stopping or shortening gradually by successive annual amputations, such branches as are tending unduly to enlarge themselves, and, by diverting the sap from the proper central leading stem, to

form a spreading and unsightly head. This is an operation which, if commenced at an early period of its growth, and completed before the age of ten years, cannot be injurious to the tree or derange its economy, like that of suddenly depriving it of large branches in a state of luxuriant growth. Some of the branches of two inches in diameter and under, treated in this manner, may be destined to be eventually removed when the flow of sap to them has been sufficiently deadened, and the stem of the tree sufficiently enlarged to render the wound relatively small. But in by far the greater number, probably nineteen in twenty, the branches, when sufficiently shortened by a clean diagonal or slanting cut, at a properly placed leading twig, is left to cicatrize and remain permanent. This operation is particularly suited to boundary, avenue or street trees, where elevated heads and clean elongated stem are important; but may be occasionally useful in park trees, to stop an ambitious or unruly limb. If pruning be begun, however, as it ought to be, in the nursery, and the main growth of the plant directed to the central stem, the after pruning of trees will be rarely and sparingly required. The best season for pruning, I conceive to be between September and the end of February, when the sap having been elaborated in the leaves is beginning to descend and be distributed for the material of next year's growth; and when the vital economy of the plant will not be deranged by the operation. The results of pruning performed on this plan will be found very satisfactory, and the most unpromising and unsightly heads gradually brought in a few years in a symmetrical form, without any perceptible checks to the luxuriant growth of the tree. When the wound is one inch or more in diameter, a little hot tar, gum shellac or oil paint laid on with a brush, will prevent the growth of moss or fungus until closed. No doubt the new wood formed over the wound does not unite with it; but this is of little consequence when the wound is small, and in avenue or park trees, cultivated rather for ornament than for timber; and I think the operation performed on the above system will not deserve the hard terms in which "pruning trees" is sometimes spoken of. It is proper to state that different trees require different degrees of pruning. The poplar and maple may be pruned pretty freely without injury; next to these the linden and the ash, whilst the horse chestnut, the elm and sycamore, require milder treatment; the amputation of the two or three last annual shoots of a branch will sensibly check its growth. The birch bears pruning least of any, and should rarely be touched. In fruit trees we deprecate the idea of being armed with the axe and the handsaw; all the requisite implements is one of Buist's best pruning knives, with which the apple and the pear, the peach and the cherry can be kept in perfect bearing order. The plum and the quince should be sparingly dealt with, unless to shorten exuberant shoots.

Agricultural Societies.

Pennsylvania State Agricultural Society.

TUESDAY, January 20, 1852.

In accordance with the fourth section of the Constitution of the Pennsylvania State Agricultural Society, the said Society met in the Hall of the House of Representatives, more than fifteen members being present.

The President being absent, the meeting was organized by Vice President A. O. Hiester being called to the chair.

On motion of David Mumma, Jr., it was

Resolved, That when this meeting adjourns, it adjourn to meet in the same place this evening.

Adjourned.

EVENING SESSION.

On motion of A. M. Spangler, the Hon. A. O. Hiester was called to the chair.

On taking his seat Judge Hiester remarked—the meeting was called in obedience to the 4th Section of the 1st Article of the Constitution, and read from the Constitution the clause which requires the members of the Society to meet at Harrisburg, on the 3d Tuesday of January in each year, to elect officers of the Society for the ensuing year. He said they did not meet at this time to make or hear speeches, but to transact business—and yet he must ask the indulgence of the Society for a few moments, that he might congratulate them on the favorable auspices under which they met. But one year ago they had assembled at this place for the purpose of organizing a State Society. They have accomplished the object most harmoniously—they were fortunate in selecting officers, competent, and with the requisite zeal to attend to the duties assigned them. The first exhibition had been held. It exceeded far the most extravagant expectations of the most enthusiastic friends of the project, in the general interest it excited—the large attendance of farmers, the grand display of agricultural products, implements and stock, and they found themselves now with all the expenses paid, and several thousand dollars in the treasury. He closed his remarks by saying that the Convention a year ago had been harmonious, and the choice of officers good, he trusted they would be equally conciliatory and equally fortunate to-night.

On motion of David Mumma, Jr., it was

Resolved, That when this meeting adjourns it adjourn to meet in this place to morrow afternoon, at 2 o'clock.

On motion, the Treasurer's report was read and adopted.

TREASURER'S ACCOUNT.

	DR.
1851.	
Feb'y. 7—To Cash of R. C. Walker, initiatory fees,	\$ 100 00
April —Cash paid by members this mo.,	4 00
May " " " " "	4 00
Sept. " " " " "	11 00
Oct. " " " " "	20 00
" " " for tickets at the fair, and admission fees of membership during the same,	4593 29
Nov. 19 — " D. Ralston, (Indiana.)	1 00
D. G. McKinley, membership subscription paid him,	80 00
	—
	\$4813 29

1851.	CR.
April—By bill of J. Clyde, for a 6 quire blank book for Treasurer, and postage paid within the year,	\$ 3 20
By various payments made appertaining to the exhibition of the Society, for which see following vouchers:	
List, termed T. Elder, Jr., Police, &c.,	221 71 1
" " Danl. Wilt, " "	66 65
Allowance to T. Elder, Chief of Police,	50 00
Paym't to Wilson & Morgan, per T. Elder, jr.	13 50
" by Daniel Wilt, work, hauling, &c.	427 52 1
" to Walters & Oaks, Clerk hire,	60 00
" Morris & Sawyer, police & watchmen,	18 00
" S. H. Brooks, telegraphic despatches,	1 73
" J. P. Rutherford, horses and hands,	3 00
" Forster, Funk & Colder, clerk hire,	45 00
" McKinley, Bigler & Wilt, hauling,	27 00
" David Hummell, rent of ground,	150 00
" Geo. Hummell, straw, hay & hauling,	38 10
" A. O. Hiester, hay, &c. paid by him,	71 31
" E. C. Williams, for use of tents,	333 00
" F. L. Hutter, Stationery, &c.,	58 45
" J. A. Shannon, police,	5 25
" C. McCurdy, printing,	7 00
" J. J. Clyde, "	7 00
" D. T. Wilson, watering stock,	30 00
" McKinley, Bigler & Wilt, lumber, fencing, &c.	865 25
" W. Colder, Sr., hauling,	36 00
" Daniel Wilt, chief of fair ground,	75 00
" C. S. Funk, clerk,	20 00
" J. M. Forster & J. Colder, clerks in ticket office,	25 00
" C. C. Mullin, expenses for preparing and cleaning House of Rep'res.	21 00
" G. Bergner, freight on certificates,	50
" W. Colder, Jr., livery and hauling,	37 00
" G. B. Laird, clerk,	30 00
" J. Lescure, clerk,	60 00
" Dr. Reilly,	55 43
" Philip Hoak, horses and hands,	8 00
" McKinley & Lescure, printing, &c.,	279 40
" Lescure & Laird, clerk ng,	100 00
" A. J. Jones, postage,	34 86
" Premiums awarded at exhibition,	993 60
	\$4277 87
Balance in Treasury,	535 42
	\$4813 29

Appropriation by the State, unpaid for want of funds, \$2000
Guarantee of Messrs. Coverly, Buehler, &c. 1200

Robert C. Walker, Secretary of the Society, submitted the following report, which was adopted:

To the members of the Pennsylvania State Agricultural Society.

GENTLEMEN—In laying before you a report for the first year's proceedings of the Pennsylvania State Agricultural Society, I am pleased to say that, instead of only having to record the proceedings of a few nominal meetings of a few theorists, met for the purpose of figuring upon paper what can only be accomplished by the practical working of the *bona fide* farmers, I have registered the doings of a society whose members compose two thousand and ninety of the farmers, mechanics and artizans of Pennsylvania. Only a year has elapsed since the organization of this association, and we are now about to enter upon the second of its operations. What was considered a problem by many at its commencement, namely, whether the proper elements existed in our State to

build up and carry forward, with success, an agricultural society, has been solved, and our institution, although in its infancy, has taken an honorable rank among the kindred associations of the world. In accordance with the prayers of the memorialists of a convention, held in Harrisburg, on the 21st and 22d days of January last, the Legislature of this State has, by its act, approved the 29th day of March, 1851, incorporated the Pennsylvania State Agricultural Society, the provisions of which are herewith presented.—[289, *Pamphlet Laws*, 1851.]

Thus has the Legislature of Pennsylvania, with a liberality characteristic of the State, appropriated directly to the use of said society, two thousand dollars, with a like amount annually hereafter to that paid in by its members, provided such sum does not exceed two thousand in any one year. Not only has our Legislature rendered efficient aid in the great cause of agriculture by appropriating money to our State Society, but by the provisions of our act of incorporation it authorizes the treasurer of every county in the Commonwealth to pay the sum of one hundred dollars to a county society, to be disbursed for the promotion of agricultural knowledge and improvement. From the fact that over two thousand persons have already become members of this association, we have reason to believe that our annual appropriation from this time forward will not be diminished.

There have been twelve meetings of the Executive Committee and one of the Society, since the adoption of the Constitution, each of which disposed of a proportionate amount of business required in making preparations for the Annual Exhibition. At a meeting of the Executive Committee, held in Harrisburg, on Thursday, the 27th day of February last, it was

Resolved, That Wednesday, Thursday and Friday, the 22d, 23d and 24th days of October, 1851, be fixed as the time for holding the first Annual Exhibition of the Pennsylvania State Agricultural Society.

At a special meeting, held in Harrisburg, on September 10th, 1851, pursuant to a call of the President, the following preamble and resolution were unanimously adopted:

WHEREAS, It has accidentally happened that the Pennsylvania State Agricultural Society, and the Maryland State Agricultural Society have fixed the same days for their Annual Exhibition, which may operate unfavorably to both, and as our Society desires to reciprocate facilities with, and promote the success of all other societies that have for their object the improvement of agriculture and the mechanic arts; Therefore

Resolved, That the time heretofore fixed for the Exhibition of the Pennsylvania State Agricultural Society, be and the same is hereby changed and fixed to be upon the 29th, 30th and 31st days of October, '51.

It was *Resolved*, That A. O. Hiester, Geo. H. Bucher, Dr. Luther Riley, David Mumma, jr., and Isaac G. McKinley, be a committee of arrangement, whose duty it shall be definitely to act upon all subjects pertaining to the first Annual Exhibition; and that they shall have power to employ such aid and assistance as necessity shall require.

A committee consisting of Frederick Watts, John C. McAllister, A. O. Hiester and Isaac Updegrove, were appointed to visit the annual exhibition of the New York State Agricultural Society.

A committee consisting of Isaac G. McKinley, David Mumma, Jr., Joseph Lescure and Geo. H. Bucher, was also appointed to attend the annual exhibition of the Maryland State Agricultural Society.

A committee was also appointed to invite the offi-

cers of other Agricultural Societies, and distinguished gentlemen of this and other States, to be present and participate in the ceremonies of our annual exhibition.

The committee appointed to select and invite a suitable person to deliver the annual address at the Agricultural Exhibition, selected the Hon. Andrew Stevenson, of Virginia, who in accordance with the invitation extended, was promptly on the ground and contributed greatly, by his excellent address, to the edification of all who had the pleasure of hearing him, and did lasting service to the cause he so ably advocated.

The address was published by the Society in pamphlet form, and one copy sent to each of its members.

It was resolved by the Executive Committee that we deem the establishment and success of an Agricultural Journal, published in Pennsylvania, as essential to the proper exposition of the principles of agriculture as practised in this State; and that we approve of the Pennsylvania Farm Journal, published at the city of Lancaster, by A. M. Spangler, and edited by S. S. Haldeman.

That for the present it be adopted at the organ of the State Society, and that farmers and all others interested in the subject of agriculture, be advised to patronize it and contribute information to its columns.

It was also resolved that the proceedings of this meeting be published in the American Farmer an Agricultural Journal, published in the German language, in Harrisburg, by J. M. Beck, and that this periodical be recommended to the patronage of the German farmers of Pennsylvania.

A resolution was passed asking the different County Agricultural Societies of this State to inform this Society of their existence. This resolution was published in the newspapers, but as yet no such society has furnished the desired information.

Suitable books have been procured in which have been transcribed the Constitution, and act of incorporation of this society; also books in which has been made an alphabetical arrangement of the names of its members with their residence and post office.

Certificates of annual membership have been procured and issued to nearly every member of the society: also certificates of life membership, none of which, however, have been issued, probably in consequence of the fee for life membership being fixed at too high a price.

A box of minerals and soil has been presented to the society for analyzation, by H. P. Robinson, of Berks county.

In consequence of the Maryland State Agricultural Society having decided to hold its exhibition on the 22d, 23d and 24th days of October last, our first annual exhibition was not held until the three last days of October, 1851. Although held too late in the season for the presentation of many fruits and vegetables, and at a time when good weather could hardly be expected, the display of articles, animals and stock of all kinds was far greater than the most sanguine anticipators had reason to expect.

During the three days of the exhibition it is thought that more than twenty thousand persons were in attendance. The ground chosen by the committee of arrangement, upon which to hold the fair, was peculiar in its adaptation to the purpose, and was located about a mile above Harrisburg, on the eastern side of the Susquehanna, embracing nearly fifteen acres which was substantially enclosed by a fence ten feet high.

On the side of the entrance was the office of the treasurer, and on the other that of the secretary.—In the latter, all articles for exhibition were entered

in books properly arranged and classified, and a card given to the exhibitor, with the number, name and description of the article, owner and inventor. All articles for exhibition were hauled by the society to and from the railroad depot, without charge to the exhibitor.

More than a hundred covered sheds were erected inside the enclosure, for horses and cattle, with many others put up for sheep, hogs, &c., and for holding hay and feed.

Large rings were constructed at a convenient distance from the stalls used for the exhibition of horses and cattle.

Long houses were neatly built and partitioned off for poultry, which were filled with almost every variety of the feathered domestics.

The "mammoth tents" of Wilson, that were used at the Rochester fair, were pitched here and there through the ground, in which were exhibited the lighter articles of usefulness, specimens of the fine arts, the handiwork of the ladies, the luxuries of the farm, the mechanic arts and inventions, and improvements in endless variety.

The agricultural implements and the coarser articles of household arts were assigned extensive plats of ground in several parts of the enclosure, and were exhibited to great advantage. An adjoining field of ten acres was used for the plowing match, and twenty-one plows were entered and contested for the premiums.

Judges on fourteen committees were appointed, who awarded premiums to the amount of one thousand dollars.

On motion of John P. Rutherford, the Secretary was ordered to have printed, for the use of the society, three thousand copies of the proceedings of this meeting: adopted.

On motion of Philip Dougherty, it was

Resolved, That the Recording Secretary of this society be authorized to procure, for the use of the Pennsylvania State Agricultural Society, a room which will answer for the meetings of the Executive Committee, and for an office for books, library, &c.; adopted.

On motion a committee consisting of W. A. Stokes, James Fife, Wm. Bell, Jer. Black and Morris Leech, was appointed by the chair to consider and report on the expediency of holding a fair in the western part of the State, and that they add to their report such suggestions of detail on this subject as they may see fit, and report to the Executive Committee; which was adopted.

On motion of John P. Rutherford, it was

Resolved, That the President and Secretary of this society be appointed a committee to memorialize Congress, on behalf of the Pennsylvania State Agricultural Society, for the establishment of an agricultural Bureau; adopted.

On motion, a committee consisting of Andrew M. Spangler, Isaac G. McKinley and Theo. Fenn, was appointed for the purpose of inquiring into the expediency of memorializing the Legislature relative to the appointment of a State Agricultural Chemist; said committee to report to this society on to-morrow afternoon.

The following preamble and resolutions were offered by David Mumma, Jr.; which were adopted:

WHEREAS, The President of the United States has, in his last and previous annual messages, recommended to Congress the establishment of an Agricultural Bureau: And whereas, This society agreeing fully with the views expressed by the President, upon this important subject, in urging its importance upon Con-

gress, in which he briefly, yet so ably urges the importance of the subject; therefore, in expressing the views of the society, we adopt his own language:— "Agriculture may justly be regarded as the great interest of our people. Four-fifths of our active population are employed in the cultivation of the soil, and the rapid expansion of our settlements over new territory is daily adding to the number of those engaged in that vocation. Justice and sound policy, therefore, alike require that the Government should use all the means authorized by the Constitution, to promote the interests and welfare of that important class of our fellow citizens. And yet it is a singular fact that whilst the manufacturing and commercial interests have engaged the attention of Congress during a large portion of every session, and our statutes abound in provisions for their protection and encouragement, little has yet been done directly for the advancement of agriculture. It is true, that this reproach to our legislation should be removed, and I sincerely hope that the present Congress will not close their labors without adopting sufficient means to supply the omission of those who preceded them.

"An Agricultural Bureau, charged with the duty of collecting and disseminating correct information as to the best mode of cultivation, and of the most efficient means of preserving and restoring the fertility of the soil, and of procuring and distributing seeds and plants, and other vegetable productions, with instructions in regard to the soil, climate and treatment best adapted to their growth, could not fail to be, in the language of Washington, in his annual message to Congress, "a very cheap instrument of immense national benefit." therefore

Resolved, That our Senators and Representatives in Congress are hereby requested to use their utmost endeavors to carry out the recommendations of the President upon this subject. That the Secretary is hereby instructed to furnish each of our Senators and Representatives in Congress with a copy of the above preamble and resolutions.

A preamble and resolutions submitted by D. Mumma, Jr., relative to a National Convention of agriculturists from the several States of the Union, was, on motion, laid on the table until to-morrow.

On motion, it was

Resolved, That this society proceed to the election of its officers on to-morrow afternoon, at 3 o'clock.

On motion, David Mumma and W. A. Stokes were appointed to act as tellers of the election for officers.

On motion, it was

Resolved, That all the officers to be elected should be voted for on one ticket.

On motion, the Secretary was ordered to have handbills printed and posted, announcing the meeting to-morrow at 3 o'clock.

Adjourned.

WEDNESDAY, 2 o'clock, P. M.

On motion of A. O. Hiester, W. A. Stokes, Esq., was called to the chair.

On motion of David Mumma, Esq., the nomination for officers was re-opened, and moved the nomination of J. M. Beck, of Harrisburg, for Recording Secretary, when the nominations were closed.

The preamble and resolutions offered by D. Mumma, Jr., relative to the establishment of a National Agricultural Society, were taken up, and, on motion, were postponed for the present.

On motion of I. G. McKinley, it was

Resolved, That the fiscal year of this society shall hereafter end on the first Wednesday after the third Tuesday of January.

On motion of David Mumma, Jr., the Secretary was ordered to have printed with the proceedings, the constitution and act of incorporation of this society.

The committee to inquire into the expediency of memorializing the present Legislature in relation to the appointment of a State Agricultural Chemist, beg leave to report, that, after consultation, they unanimously recommend to this society the selection of a committee, whose duty it shall be to draft a memorial to the present Legislature, asking the appointment of a State Agricultural Chemist. It is not considered necessary to enter into a labored argument to prove the necessity of such a step, it being deemed sufficient merely to advert to the fact that wherever a State Chemist has been appointed, the very best results have followed.

[Signed.]

A. M. SPANGLER,
THEO. FENN,
I. G. MCKINLEY,
JAS. FIFFE,
PHILIP DOUGHERTY.

On motion of Gen. William Ayres, it was

Resolved, That the thanks of the Pennsylvania State Agricultural Society be tendered to the members of the House of Representatives for their kindness in giving to this Society the use of their hall.

On motion of A. O. Hiester, it was

Resolved, That, as a society, we approve of the tone, spirit and ability with which our organ, the Farm Journal, has been conducted during the past year, and that we cordially recommend every member of the society not only to subscribe for it himself, but to use his influence to extend its circulation among his neighbors.

On motion of David Mumma, Jr., it was

Resolved, That the Americanischer Bauer, printed at Harrisburg, in the German language, by J. M. Beck, is well worthy of the patronage of our German farmers, and that we cordially recommend it to our German population as a valuable and interesting periodical.

Wm. A. Stokes who had been appointed one of the tellers, being in the chair, on motion, F. C. Carson and James L. Reilly were appointed as tellers to hold the election of officers.

The Chairman announced that the hour having arrived for opening the election, the members proceeded to elect their officers, when one hundred and thirty votes were polled, and the following officers were selected for the ensuing year:

President—FREDERICK WATTS.

Vice Presidents.

1st Congressional District	—Peleg B. Savery.
2d	“ Jos. R. Ingersoll.
3d	“ Caleb Cope.
4th	“ Jas. Gowen.
5th	“ John Kennedy.
6th	“ William Stavely.
7th	“ Ab. R. M'Ilvaine.
8th	“ Jacob Frantz.
9th	“ Henry Shubert.
10th	“ Conrad Shimer.
11th	“ Jacob Drumheller.
12th	“ William Jessup.
13th	“ Jacob Gundy.
14th	“ A. O. Hiester.
15th	“ J. S. Haldeman.
16th	“ Finlaw M'Cowen.
17th	“ Jno. M'Williams.
18th	“ Henry Beeson.
19th	“ Wm. A. Stokes.
20th	“ Wm. Patterson.

21st Congressional District	—Hiram Hultz.
22d	“ Morris Leech.
23d	“ James Miles.
24th	“ David Ralston.

Corresponding Secretary—Alfred L. Elwyn.
Recording Secretary—Robert C. Walker.
Treasurer—G. H. Bucher.
Librarian—Luther Reilly.
Chemist—Charles B. Trego.

Executive Committee—I. G. M'Kinley, David Mumma, Jr., Robert M'Allister, John B. Rutherford and Simon Cameron.

The following preamble and resolutions were taken up and adopted:

WHEREAS, It is now an admitted fact that in no way can a nation increase in wealth and power so fast, as by encouraging and securing a rapid improvement in the science of agriculture. All admit, that whilst manufactures improve, commerce gives value, and labor and capital stimulate, it is agriculture alone that originates; the earth is the parent of them all—all equally derive their origin from the cultivation of the earth, and all must be equally dependent upon it for subsistence. Regarding it then as the basis of all other arts, it justly claims pre-eminence over all others; and such is the connection with all the comforts of the human race, that it may justly be said that agriculture is the only firm and stable foundation of national greatness. And the various State societies have already demonstrated the fact that in no way can this great and valuable science be so substantially and rapidly improved, as by organized and concerted action, and it is therefore a self-evident fact that the formation of a National Agricultural Society is at this time a matter of great moment and importance; therefore, for the purpose of forming such society, be it

Resolved, That we recommend the calling of a convention of agriculturists of the United States, to meet at the city of Washington at such time as may be fixed upon, as soon as it is ascertained that a sufficient number of States of this Union have approved of the plan to warrant such undertaking.

Resolved, That this society will elect one delegate from each Congressional district of the State, who shall be a member of this society, to represent this society in said proposed national convention.

Resolved, That this society expects and earnestly requests the co-operation of every State in the Union in this matter.

Resolved, That all States or State societies willing to co-operate with us in this laudable enterprise, are requested to inform the President of this society of such fact; and so soon as five States have so signified their willingness to act in the matter, then the President of this society shall immediately after ascertaining, (by corresponding with the several State societies upon the subject,) the most suitable time for calling such convention, fix on a time for the meeting of said convention, of which he shall give notice in as many papers as may be necessary.

Resolved, That the Secretary of this society shall forward a copy of this preamble and resolutions to the President or Secretary of every State Agricultural society in the United States; and also furnish a copy to the National Intelligencer and Washington Union, for publication.

Adjourned.

EVENING SESSION.

On motion of George H. Bucher, the Constitution was amended, in the second section, by a unanimous vote, so as to read "quarterly" instead of "monthly,"

and at any other time when convened by the President.

On motion of George H. Bucher, the Constitution was amended in the first section so as to read "ten" instead of "twenty."

A motion was made by John Beale to alter the second section of the Constitution, by striking out the words "three-fourths of whom shall be practical agriculturists or horticulturists." Lost.

On motion of A. M. Spangler, a vote of thanks was given to F. C. Carson and James L. Reily, for their services as tellers.

On motion of W. A. Stokes, it was

Resolved, That the Executive Committee be recommended, if they deem it expedient, after hearing the report of the Committee charged to inquire on this subject, to make arrangements for holding a fair and exhibition next autumn, in the western part of the State.

Adjourned *sine die*.

R. C. WALKER, *Secretary.*

HARRISBURG, JAN. 24, 1852.

A. M. SPANGLER, Esq.

I hand you herewith Dr. Brincklé's "Remarks on Entomology" for publication in the *Farmer Journal*.—One word of explanation.

Dr. Brincklé was called on by the Agricultural Convention last winter to prepare an article on this subject. In December last the Dr. placed the article in my hands in Philadelphia, with a request on his part and a promise on mine that it should be laid before the Society. I urged the Dr. to come to Harrisburg and read it himself, but this he peremptorily declined, and expecting at that time to be present at the annual meeting, I received it from him for the purpose of submitting it to the Society. But the snow banks delayed my arrival here till after the Society had held its meeting and finally adjourned. I then consulted the officers of the Society whom I found here as to the disposition to be made of the essay, and by their advice I place it in your hands for publication and accompany it with this note of explanation, as due, not only to the Society, but to the learned author.

Very truly your friend,

Geo. J. WOODWARD.

REMARKS ON ENTOMOLOGY

Chiefly in reference to an Agricultural benefit.

BY W. D. BRINCKLE, M. D.

In compliance more with the spirit than with the letter of a resolution passed by the Pennsylvania State Agricultural Convention held at Harrisburg, in January, 1851, I present, at this time, for your consideration, some remarks on ENTOMOLOGY. Had, however, a copy of the resolution referred to, reached me prior to the adjournment of the Convention, the proffered honor would have been respectfully declined, and the name of a gentleman* suggested, who is infinitely more competent to the task than myself, and whose entomological fame has passed beyond the confines of our own State and our own country. And should an Entomologist be required to draw up a *Report on the noxious insects of Pennsylvania*, no one more amply qualified could be selected.

ENTOMOLOGY is that branch of Zoology which treats of Insects. The term has its origin in two Greek words *εντόποιος νόος*, literally signifying *insect—history*. This department of Natural Science exercises an important agency in the economy of the physical world, and is intimately connected with the welfare and happiness of our race. To enter fully into its

consideration, would require volumes instead of the few pages to which we are now restricted. Our limited space will, therefore, only allow us to present a very concise general view of the subject, with a brief and condensed outline of such of its characteristic features as have an agricultural bearing.

In regard to the extent of this branch of Zoology, no little diversity of opinion has prevailed among naturalists. By some it has been made to include all, or nearly all, of the articulate or invertebrate animals: such as crabs, lobsters, earth-worms, leeches, spiders, centipedes, &c. Others confine its limits to the winged insects (Ptilota) of Aristotle; thus, very properly, avoiding the unnatural association of groups possessing such incongruous characters. In accordance with this view, an INSECT, from the Latin *insecta*, cut or divided, is an articulate animal with a body insected or divided into three chief portions—the head, the thorax, and the abdomen,—and to the thorax are attached six legs, and ordinarily two or four wings.*

This definition, however, of insects is only applicable to them in their final or perfect state. But before they can arrive at this state, and acquire this structure, they must necessarily pass through various wonderful changes and transformations called their metamorphoses.

In their final or perfect insect form, the prominent, and in many instances, the only object of their existence, is the perpetuation of their kind, by reproduction. Soon after pairing, the female, guided by an inscrutable instinct, deposits her eggs[†] in some suitable place[‡] where the appropriate food of the young is at hand. The great purpose of life being now accomplished, both the male and female usually die.—Occasionally, however, the provident care of the parent is necessary to the support and sustenance of their offspring. When this is the case, and in some instances where no such necessity exists, their life for a time is prolonged.

After the lapse of days, weeks or months, the egg hatches, and becomes a caterpillar, grub, or maggot. This is the insect's first state of existence; and in this state it is termed a larva. Except in a few ORDERS in which the metamorphosis is incomplete, the larva does not possess the slightest resemblance to the insect in its final or perfect form. No sooner does it emerge from the egg, than it commences eating voraciously; and in a few days, the epidermis or exterior tunic becomes stretched to its utmost extent, preventing the further growth of the larva. A new epidermis is now formed beneath the old one, which then splits open, and the larva by its contortions casts

*These three portions of the body are subdivided into joints or rings termed segments. The head constitutes the first segment—the thorax contains three, which are called thoracic segments—the abdominal segments vary in number in the different orders, and sometimes it is not uniform in the sexes of the same species: in the butterflies and moths (Lepidoptera) it is usually nine, in beetles (Coleoptera) six or seven.

†Insects are oviporous. To this general law there are some apparent exceptions; thus the plant-house, (Aphis) at certain seasons of the year, and the Flesh-Fly (Carinophaga carnaria) and a few others, give birth to larvae; the young of the Forest-Fly (Hippobosca) and congeners are retained within the matrix of the parent till they have completed their larval life, where they enter the world in the pupa state. In these instances, however, the larva is not developed in a uterus and nourished through the medium of a placenta, as is the case with the embryo of viviparous animals; but the egg is hatched in the body of the mother.

‡Many of the beetles (coleoptera) bugs (Hemiptera) grasshoppers, &c., (Orthoptera) deposit their eggs in the earth—most of the butterflies and moths (Lepidoptera) especially those that are herbivorous in the larva state, and many of the predaceous insects as the lady bird hemerobius and syrphus, exclude them on the foliage—some insects lay them in fruits, nuts, and grain—the 17 years locust and many others, in fissures made in the wood with their ovipositor—the dragon-fly (Libellula) and other insects aquatic in their larva state, on water plants—and the parasites, in the eggs and larva of other insects.

it off. This moulting process may occupy two or three days; during which time the larva is languid, and takes little or no food. Shortly after it has forced itself from its old skin, its ravenous appetite returns with renewed vigor. At intervals of six or eight days, a second and a third moulting takes place.—These moultings are always succeeded by an increase of voracity; which in some instances is so great, that a caterpillar will consume, in twenty-four hours, one hundred and fifty times its own weight of food.

The larva, at length, attains its full size; it then ceases to eat and prepares for its last moulting. It selects an appropriate place, where it spins its web, makes its cocoon, reposes for a few days, and finally casts off its larval skin for the last time; after which its form is so essentially different from what it had previously been, that it would not be recognised as the same insect, by one not conversant with these transformations.

It is now in its second state of existence, and is no longer termed a larva, but is denominated a pupa, anælia, or chrysalis. Some caterpillars pass into the pupa state in their larval skin without moulting; and some without weaving a cocoon. In its pupal period of existence, when the metamorphosis is complete, the insect is quiescent, and takes no food. In this form, resembling in some measure a mummy swathed in its cerements, it remains for weeks or months, when it bursts its pupa case or shell, and assumes its final configuration.

It is now termed an *Imago* or *Perfect Insect*, and is furnished with wings,* and various other organs and appendages, including the sexual, which were before either absent or in a state of imperfect development, and divested of many that it previously possessed.—And although still the same insect, its form and general aspect are so materially altered, that it no longer retains a vestige of its former identity.†

Several orders of insects (Orthoptera, Hemiptera, and some of the Neuroptera) never pass through the transformations now described and which apply chiefly to the butterflies and moths, (Lepidoptera.) Nevertheless, they also undergo certain changes which are termed an incomplete metamorphosis. Notwithstanding they cast their skin several times, their conformation continues to bear more or less similitude to that of the perfect insect. This is the case with grasshoppers, cockroaches, the cicadae, &c. The rudiments of the wings are perceptible soon after the first moulting. On the completion of the second, the insect is called a Nymph, which corresponds with the Pupa of other orders. The third moulting terminates the final change, and the Nymph becomes an Imago. Those insects that undergo this incomplete metamorphosis, are, in all their stages, capable of locomotion.

A knowledge of the various transformations, we have now been considering, will enable you to engage in many curious and interesting entomological investigations, by which you will obtain much practical information. For instance, you occasionally find, on your fruit trees, plants or vegetables, clusters of small eggs, and you are probably anxious to know by what insects they were deposited. This can readily be ascertained by placing the eggs, with the

* The females of several species of insects are destitute of wings, and are on that account are apterous.

[In the order *Coleoptera* there are a few instances where both male and female are without wings; as in some of the *Carabidæ*, *Blapsidæ* and other terrestrial darkling beetles, which have no use for wings, in these the sutures that usually divides the elytra or wing-covers of the winged species, is firmly united, forming a solid shield.—*Sub-Ed.*]

† Some insects are two or three years in undergoing their metamorphoses; and the seventeen years locust (cicada septendecim) requires seventeen years to complete its larval and pupal stages of life.

wood or leaf to which they are attached, in a phial, and closing the mouth with gauze or some suitable contrivance that will admit a sufficient supply of atmospheric air. Generally, in the course of a few days or weeks, the eggs hatch, and the insect makes its appearance in its young larva state. It is perhaps even now unknown to you; in which case you must endeavor to find out its appropriate aliment, by furnishing it with food of different kinds. Should these attempts to discover its proper nourishment prove unsuccessful, they will, at least, reveal to you the substances on which it does not feed,—an item of no little importance. But if the kind of food it requires be ascertained, you can then furnish an adequate daily supply for its requirements till its full grown is attained; after which it completes its metamorphoses, and you will have the gratification of seeing the perfect insect. Again, you often notice on vegetable productions a great variety of larvae differing essentially in their form, color, and general aspect. Now by confining and feeding these larvae in the manner just mentioned, you will be able to watch their several transformations. Some, you will find, will be metamorphosed into beetles, some into moths or butterflies, and some into insects belonging to the various other orders. Many insects, after completing their larval existence, always burrow in the ground to finish their transformations. In such cases, it is necessary to place an inch or two of earth in the bottom of the glass vessel; and if this precaution be not taken, the larva usually perishes without undergoing its final metamorphosis. The worms you meet with in plums is of this description. If, when fully grown, you confine it in the way and under the conditions just pointed out, in a few weeks you will have an opportunity of seeing a small beetle which you have often heard of, though probably you have never seen before—the far-famed and destructive *Corculio* or *Plum-weevil* (*Rhynchoscius nenuphar*). But the worm, so commonly met with in the apple and pear, is capable of completing its metamorphoses without burrowing in the ground. It is unnecessary, therefore, to place earth in the bottom of the phial in which it is confined. The mouth of the vessel, however, in this case, should be secured with a glass stopper; for if cork be used for this purpose, the worm will readily liberate itself from its captivity, by cutting its way through it. When it finds escape impracticable, it proceeds to spin a web or cocoon, passes into its pupa state, and eventually is metamorphosed into the codling moth (*Carpocapsa pomonella*) so often seen sporting and hovering around the light in our mansions on summer evenings.

All of you, I trust, will embrace every opportunity of putting into practice the plan now designated, whenever grubs, caterpillars, and other larvae, may come in your way. You will find it, not only an amusing and gratifying recreation, but a most fascinating mode of acquiring much interesting and useful knowledge, in regard to the economy and habits of many of our destructive insects in their different forms of existence. Care must be taken, however, not to confound the perfect insect of a larva, with some of its parasites. For certain Dipteron or Hymenopterous insects, as you will presently be informed, are hatched and live within the egg, larva, and pupa, of other insects, till their final transformation is accomplished; when they escape in the form of a two-winged fly, or an ichneumon.

To the dry details of the anatomical structure of Insects, it is not intended that your attention should be directed in this place, or at this time. It is necessary, however, that you should not be altogether

unacquainted with some of their characteristic anatomical and physiological peculiarities.

All insects receive their food either by chewing or by suction. The former are denominated Maudibulate insects, the latter Haustellate or Suctorial. The structure and configuration of their oral organs, therefore, are indicative of the nature and consistence of the nourishment on which they feed. No insect provided with a suctorial apparatus can subsist on solid food; nor can those with a manducatory mouth live on liquids. If, then, you observe a plant, the leaves of which have been much eaten, and you find on it insects with a haustellate mouth, you have, in their oral structure, conclusive evidence that these insects did not commit the depredation on the foliage.

One of the most remarkable peculiarities of insect-life is their mode of breathing. In them, the function of respiration is performed by an organism differing in its arrangement and position from that of most other animals. Instead of communicating with the mouth, the external respiratory organs are found on the surface of the body, in one of three forms, viz: spiracles, air-tubes, or branchiae.

Spiracles are simple incisions or circular openings at the sides of the segments of the body. Air-tubes are essentially the same as the preceding, being spiracles elongated so as to project beyond the surface. They do not always occupy the same position as the former, but are usually placed at the first or last abdominal segment, and are only found in some insects that are, in their larval state, denizens of the water. Branchiae or Gills are processes of the epidermis or skin; and are confined to aquatic larvae. Their ordinary form is that of hair or leaves, which are filled with delicate little air-pipes, that imbibe, from the water, the air it contains, and convey it to the main tubes, through which it is transmitted to every part of the body.

The internal respiratory organs are tubes called tracheæ. They commence at the spiracles, air-tubes or root of the branchiae, and ramify in all directions, thus furnishing to the blood the oxygen it requires for the support of life.

In regard to the Senses, there are strong grounds for believing that insects possess them all; though sight is the only one that can, with certainty, be referred to a particular organ. Various considerations, however, favor the opinion, entertained by many entomologists, that the antennæ are the organs of hearing—the palpi of feeling—the tongue of taste—and the mucous or living membrane of the tracheæ of smelling.

The Eyes of insects differ from those of other animals in their immobility. There are of two descriptions, simple and composite. The composite eye is placed on each side of the head; and though apparently a single organ, it is composed of a great number of very minute hexagonal facets, every one of which is, in reality, a separate eye. These facets or lenses are computed to amount, in some insects, to many thousands. The simple eyes (ocelli or stemmata) are generally three in number, of small size, hemispherical in form, and placed triangularly on the crown of the head. The eyes of larvae are simple ocelli arranged in groups. Simple as well as composite eyes are usually met with in insects in their winged form. Some insects are entirely blind, at least in one stage of their existence, having neither simple nor compound eyes. This is the case with the maggots of flies, (Diptera) the larva of the different species of *Syrphus*, and of some minute beetles, (Coleoptera) and the grubs of the cockchafer (*Melolontha*) as well as the grubs of the rest of the Petalocerous division of the Lamellicornes.

Until a comparatively recent date, it was generally

believed that insects were destitute of a circulatory system. Its existence, however, has been fully established by the investigations of Carus, Comparetti, Bowerbank, Burnmester, and others. A heart, in all respects analogous to that of the higher orders of animals, it is true, they do not possess. Nevertheless this name has been applied to a longitudinal tube consisting of a congeries of chambers, and extending the whole length of the body, beneath the dorsal integuments. It is readily distinguished by its contractions and dilatations. The fluid contained in this vessel, differs in color and temperature from the blood of the vertebrate animals; being cold, and colorless, yellowish, or of a greenish tint. Nor is it distributed to the various parts of the system, as in the vertebræ, by means of arteries and veins. By the contraction of the heart-chambers, it is propelled along the dorsal tube to the head, where it is poured out, and forced, by the *vis a tergo*, into the crevices and interstices of every part of the body, penetrating even the legs, wings, and antennæ. After uniting with the nutritive juices that transude through the parietes of the intestinal canal, it is again drawn into the dorsal chambers or reservoirs by their expansion. The air-tubes extend their multitudinous ramifications in all directions through this fluid, and convey to it, as you have already been informed, the supply of oxygen so necessary to the existence of the insect.

The digestive system of insects does not present any characteristic peculiarities requiring special notice. In them its power is commensurate with their voracity. Many herbaceous substances that are poisonous to other animals, are devoured by some of the herbivorous insects with impunity. Not only is every plant subject to their attacks, but each part of it becomes the favorite food of one or more tribes.—While some subsist entirely on the root, the appropriate aliment of others is the blossom, fruit, seed, leaf, bud, pith, bark, albumen, or even the solid wood itself. Of those that obtain their nourishment from the foliage, some only extract its juices, as the Plant-Louse, and Hessian Fly; others eat the parenchyma alone, as the mining caterpillar; not a few prefer the under surface, as the leaf rollers; many select the upper surface, as the slug; while the caterpillars of most of the butterflies and moths eat the whole leaf. Of those that obtain their food from flowers, some subsist on the petals, others on the pollen, and a still greater number on the honey in the nectarines. With their transformations, a change of food generally though not invariably becomes necessary. The caterpillar, the maggot, and the grub, require, usually, a very different kind of food from the moth, the fly, and the beetle. The grub of the cockchafer (*Melolontha*) lives on roots, the beetle on leaves. Animal food is the aliment of the larvae of the ichneumons, while in the imago or perfect-insect form their sustenance is obtained from the juices of flowers. Some insects, after the completion of their final metamorphosis, take no food whatever; such are the day-flies* (*Illemonbi*), the caddice-flies (*Phryganeæ*), and the may-flies (*Ephemiræ*).

The amount of food consumed by insects is almost incredible; consequently the injury done by them to vegetation, must at times be exceedingly great.

You are all familiar with the appalling accounts of the devastation committed by the *Locusts of the East*. Occurring, as they often do, in cloud-like swarms so dense as to obscure the light of the sun, it is not surprising that they should, in so short a period, destroy every vestige of vegetation where they alight; and that their course should frequently be followe

* Not the common house-fly.

by famine and pestilence. Fortunately for us, this insect-scourge has never visited our western hemisphere. Belonging, however, to a closely allied family of the same Orthopterous order are the grasshoppers, many varieties of which are common to this country, and at times do no small injury to vegetation.

CONCLUSION IN NEXT NUMBER.

Our Poultry Yard.

For the Farm Journal.
Management of Fowls.

MR. EDITOR.—Since everything connected with the farming interest, rightfully claims a place in the *Journal*, permit me to offer a few suggestions in relation to the management of poultry, believing it to be a branch of domestic agriculture entitled to greater attention than it generally receives.

Many farmers keep a large number of fowls running at large, paying little or no attention to them, presuming that food sufficient for them will be found about the barn, or in the fields adjoining it. The result, as a matter of course, is, that they are unprofitable stock. Others again keep comparatively few, which are kept in a yard, well fed, and cared for, and during the season when they could damage crops not permitted to range at large. Facts prove that the smaller, but better fed stock is the most profitable.

Now the whole secret of making fowls profitable

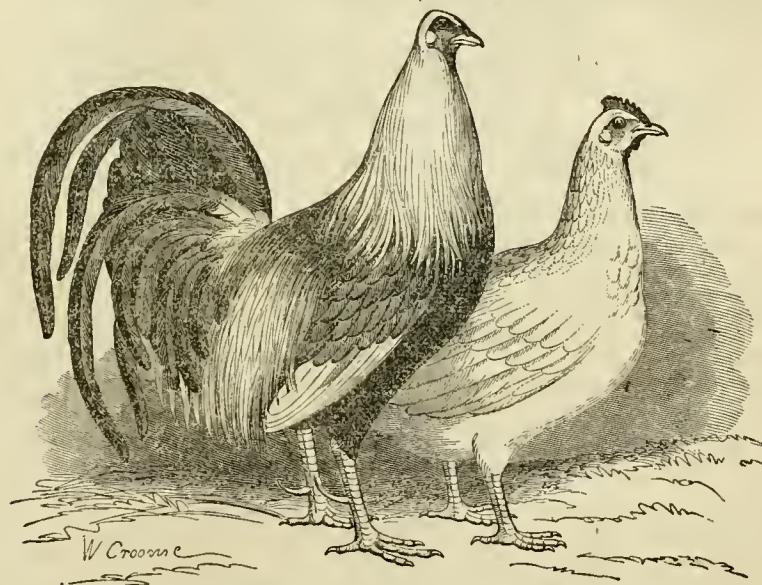
lies in a nut shell. Where a large number is kept, the amount of animal food they find in the barn yard, &c., is wholly insufficient to make them good layers. This is especially the case during the winter months, and hence the necessity of supplying the deficiency. This can be done by giving them a small quantity of meat. The offal from the table should always, instead of being thrown into the slop barrel and given to the pigs, be thrown to the chickens. They will devour it readily. When the quantity of scraps is not large, a little fresh meat should be thrown to them occasionally.

During the moulting season they should be particularly well fed, and comfortable shelter provided for them. The food should also be varied somewhat, as chickens love a change occasionally. If fowls are neglected through the moulting season, (during which time they always cease laying) they rarely commence laying again before the spring months, when eggs are cheap. The object of the farmer should be to keep his fowls laying through the winter months when eggs command a good price.

By pursuing this plan, chickens will generally lay during the whole of the winter months, and prove profitable; and a small number well fed will be more valuable, than a larger number badly kept.

J. S. KELLER.

Orwigsburg, Pa., Jan. 8, 1852.



MR. J. WISTAR'S GRAY GAME FOWLS.

THE GAME FOWL.

Of all the varieties of Domestic Fowls, except, perhaps, the Smooth-legged Bantam, the Game Fowl is the most symmetrical. It is more slender in the body, the neck, the bill, and the legs, than other kinds, and the various hues of the plumage are more brilliant and showy. Their flesh is white, *compact*,—like that

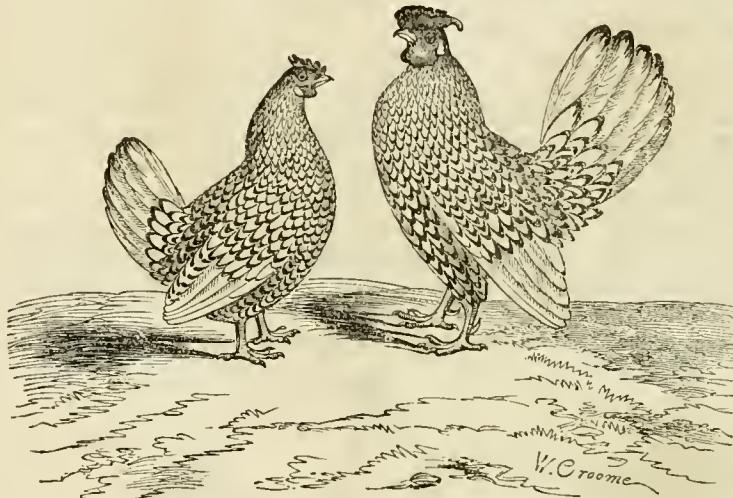
of the race-horse as compared with the scrub,—delicate and very nutritious; but the extreme difficulty of rearing the Chickens, owing to their natural pugnacity, which shows itself at a very early period, detters most breeders, excepting those who breed for the coek-pit. "Whole breeds, scarcely feathered, are sometimes stone-blind from fighting, to the very small-

lest individuals; the rival couples moping in corners, and renewing their battles on obtaining the first ray of light." The game Eggs are rather smaller than common, but finely-shaped and extremely rich and delicate. The weight of this Fowl is from $3\frac{1}{2}$ to $5\frac{1}{2}$ lbs., though I have heard of 8 lbs., and my friend, Wm. Wistar, Esq., near Germantown, assures me that he has a Game Cock, thorough-bred, that now weighs $9\frac{1}{2}$ lbs. The practice of fighting Cocks is supposed to be of Grecian origin. It was adopted by the Romans about 470 years before the Christian era.

"There are evidently two varieties of the Game Fowl, if not more. (Assuredly.) The first, occasionally seen in the yard of the farmer, is a bird over the average size, and rather heavily formed; rather too much comb; breast quite black; neck, back and wings of a very deep red; tail, glossy green. The Hen plain brown, with a lighter-coloured neck, sometimes a little streaked with ochre; legs light-coloured or white.

"The other variety, which I much prefer, and now possess, is a smaller Fowl, of a peculiarly light and elegant make; head very small and fine; neck, light orange-red; breast richly spotted, as are, also, in a degree, the wings; back, very rich red; tail, glossy greenish black; legs, dark. Hens, brown of various shades, the feathers being streaked with pale ochre down the middle, the same as Pheasants; comb, in the Cocks very small, and not very large in the Hens.

"These are most spirited birds, and will soon gain the ascendancy of any yard. The eggs are slightly tinged with yellow-buff, rather small, and long in shape. Hens, good layers and sitters. Chicks, when first hatched, exceedingly pretty, being marked with a deep brown streak on the head and neck, that continues down the back. They are hardy little things, and easy to rear.—*Dixon & Kerr's Ornamental and Domestic Poultry.*



MR. WISTAR'S SEABRIGHT BANTAMS.

THE SMOOTH-LEGGED BANTAM.

The small White, and also the coloured Bantams, whose legs are heavily feathered, are sufficiently well known to render a particular description unnecessary. Bantam-fanciers generally, with Sir John Sebright at their head, prefer those which have clean bright legs, without any vestige of feathers.

The rule with fanciers is, that a thorough-bred Cock should have a rose comb; a well-feathered tail, without the sickle feathers, however; full hackles, a proud, lively carriage, and ought not to exceed a pound in weight. The nankeen-coloured and the black are the general favorites.

They are said to have been imported, by the late Sir John Sebright, from India. For perfection of model, and beauty of plumage, nothing can exceed them. The pair portrayed on the opposite page are in the possession of Mr. Wistar, of Germantown, and were procured for him by a friend in England.—They are, as may be seen in the portraits, beautifully marked; the ground of the feathers being a rich orange brown or cream-colour, and each feather pencilled round the edge with black, with the greatest uniformity. They are sometimes called the "Sebright Fowl." They are bred in and about London, also in various parts of England and Ireland, with the most scrupulous care. In London there are stated times

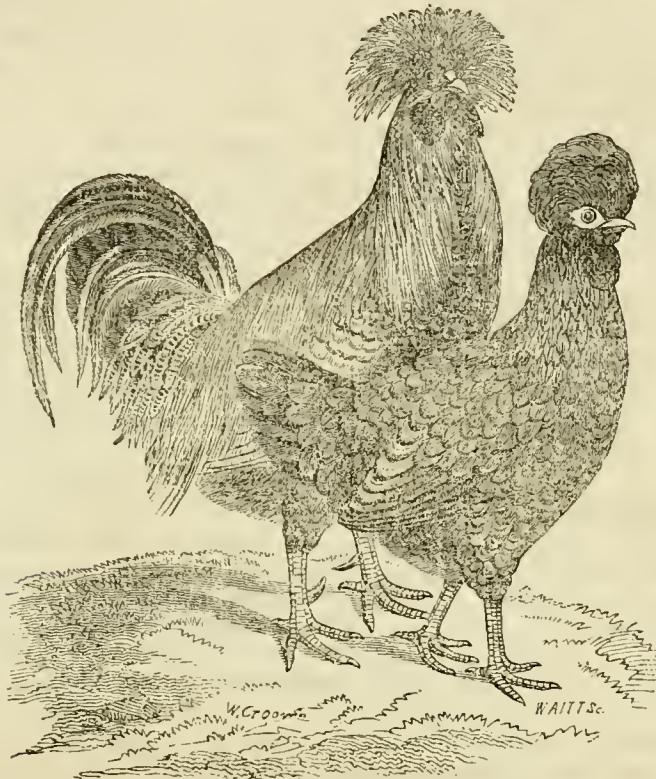
for the exhibition and sale of these birds; and Mr. Nolan tells us that "the regulations of the Society of London Amateurs, require that each exhibitor shall offer his birds for sale, after the exhibition, and may bid himself, and put on a prohibitory amount of purchase-money. It is on record that Sir John bid up one of his diminutive Hens to £29, and bought her in at that price. And it is recorded in the *Illustrated London News*, of 20th February, 1847, that so late as that date, two Hens and a Cock, of these beautiful emblems of pride and consequence, sold for £50 and 1s., being a shilling more than the amount put on them by their owner. At the sale of the late lamented baronet, the golden grounded birds averaged £5 a brace, and the silver spangled £8 a brace; although they are becoming comparatively abundant, they still keep up a high price in the London market, if well marked. There has been lately offered here, some fine specimens, from Sir John's own stock, at a very low figure. I do not think any thing could exceed their perfection of feather. A lady near Shrewsbury, has procured some fine specimens of both gold and silver spangled, from this neighborhood; if she still retain them, I think she may challenge England; as far as I can judge, they are quite superior to those that took the prize in London. Some ladies in Queen's County, have procured fine specimens from the late

baronet's stock; I have no doubt, but under their fostering care, the breed will be kept up with as much ardor as during the lifetime of the great poultry-patron Sir John, and that we will be breeding them, as in the baronet's lifetime, "to a single feather," and retain their character of the "prettiest of domestic birds." The male birds should stand about twelve inches high: the standard weight being twenty-two ounces; the plumage as above described, (the rose-comb is preferred;) the wattles are moderately long-facè and throat bare; no top-knot or ruff on neck; as

free as possible from hackle; tail without the plume, or what is called hen-tailed; perfectly clean-legged." —*Dixon & Kerr's Ornamental and Domestic Poultry.*

THE SPANGLED HAMBURG FOWL.

This beautiful variety is distinguished from other members of the same family, by their large top-knots being coloured instead of white, and the black and conspicuous muffle or ruff on the throat and under the beak. There are two kinds, the golden and silver spangled; the ground of the feathers of the gol-



HAMBURG FOWLS.

den spangled being a rich yellow, approaching to an orange-red, with black spots or spangles. The silver spangled differs from the preceding, by the ground of the feathers being silvery white. The comb, as in other highly crested Fowls, is quite small; the wattles are also diminutive; legs generally blue; skin and flesh white; Eggs a moderate size, but abundant; Chickens easily reared. In and about New York, a few years since, this Fowl abounded—both the golden and silver varieties. They may weigh, say, three and a half pounds, for the female, and from four and a half to five and a half for the male. The Cock stands more than twenty inches high, and the Hen about eighteen inches.—*Dixon & Kerr's Ornamental and Domestic Poultry.*

Communications.

For the Farm Journal.

Mixing Plaster with Stable Manure.

MR. EDITOR:—In the December number of your valuable Journal, I find an article over the signature

of A. L. II. on the subject of deep plowing, economizing manures, &c., to all of which I heartily assent, and have no doubt if the farmers of the State would adopt the suggestions, they would be amply remunerated. It is very apparent that if A. L. II.'s. suggestions were carried into practical effect, that the crops of Pennsylvania would be increased at least one-third over the present yield. It becomes a matter of serious duty with our farmers to discard the present indifferent and wasteful manner of farming, and adopt a system which will not only prove beneficial to ourselves, but to the interests of agriculture at large.—The grand requisite for the accomplishment of so desirable an end, is the advancement of intelligence amongst the farming community. Your Journal furnishes one of the means required, and its general circulation, containing as it does, so much valuable information relating to the advancement of agriculture should be encouraged by all.

Having premised thus much, permit me to state my mode of managing manures. I do not offer my plan, because it possesses any novelty, but because there may be some who will peruse it to their advantage.

For the last two years, I have always kept on hand a quantity of ground plaster, and whenever my stables are cleaned and the manure drawn to the heap, I sprinkle over the fresh manure a portion of the plaster. My object in doing this is to retain as much possible of the fertilizing properties of the manure. We all know that one great end to be secured, is the application of manure to the soil in as well rotted state as may be, without too much waste of ammonia. Chemists, I believe, agree, that the value of plaster for agricultural purposes, consists, not in any peculiar fertilizing properties it possesses but in its power to fix the gases essential to the life of plants, and my own experience satisfies me that it can be applied for this purpose in no way more beneficially than as above stated.

I am led to think that stable manure will rot much sooner when plaster is mixed with it, and that as it fixes the ammonia, a load of it is far more valuable than where it is left exposed to the action of the sun and rain.

J. F. HERR.

Strasburg, Lancaster co., Jan. 5, 1852.

For the Farm Journal.

The dignity of labor.

I honor the man of achievement! It matters not whether his employment be that of the hands or of the head, he of all others has my respect and veneration.

He who regards labor as ennobling and elevating, is the man who will earn respect and gains it, when the pride of the weaker and more indolent has been like a strong chain binding the faculties and powers, and dragging him downward into obscurity, or want.

Who tills our fields—rears our cities—builds our navies? Who has invented and skilfully manufactured our world of polished machinery, and who drives it with a power that none can comprehend in labor for the good of mankind? From what source starts into life and being, the magic works of Art, that ornament our public buildings, and private residences? *It is patient, persevering Toil and Labor*, that has achieved whatever is great, and good, and noble! Then who would not be a *laborer*, and hold in silent scorn the being who in his "*low thought*" may consider it servile or degrading to wield a manly strength in the useful and honorable achievements and occupations of life.

It has been said, and that most truthfully, that "Agricultural labor has the sympathies of the universal conscience of mankind. It is indeed co-operating with Nature in the most interesting, because most useful parts of her work; and who like the farmer sowing the seed, reaping the harvests, culti-

vating and gathering the fruits, rearing the animals and investigating subjects connected with such employments, has higher claim to respect, if with it he connects that degree of intelligence which his success and advancement as an intelligent being demand.

A brighter day is dawning on the Agricultural interests of our country. Chemistry is throwing new and brilliant rays into the secret operations of nature and is there unfolding the wants of the plant and the soil so plainly, that he who reads may understand, and the enriched earth in consequence is pouring out her increased treasures into the granaries of the husbandman.

Practical science has become a need of the farmer and a part of his business. The improvements and developments constantly coming to light, and given to the public, must and will have their effect.

Peace, Plenty and Contentment are in his abode, even when discordant elements may be all around him. The domestic ties strengthen and the best affections are cultivated away from the noise and turmoil of life.

There is time and place also for calm thought, and intellectual improvement which gives dignity to the character and will inevitably command the highest respect of mankind.

L. G. A.

Chittenango, N. Y., 1852.

For the Farm Journal.

MR. EDITOR:—I take the liberty of inquiring, through the medium of your valuable Journal, the best mode of cultivating the Flax Plant, also the process of rotting and preparing it for use. Can you inform me on this subject? I can find but few books written on this subject, it being a comparatively new one in this country; having, I believe, never been carried on to any great extent. If you, or any of your subscribers, can give me some information on this subject, you will much oblige your friend,

W. H., a Philadelphia Subscriber.

Philadelphia, Jan. 20, 1852.

For the Farm Journal.

MR. EDITOR:—Can you, or any of your subscribers, inform me how I can obtain the Bush Cranberry, and also the Barberry? If any one having them, or either of them, would be so kind as to send me a few seeds of each kind, properly labelled, or give me any information by which I might obtain them, I would be greatly obliged to them for their trouble.

Respectfully yours,
ROBERT FOSTER.

Lewisberry, York co., Pa., Jan. 20, 1852.

Office of the Pa. State Agricultural Society, }
Harrisburg, January 29, 1852. }

There will be a meeting of the Executive Committee of the Pennsylvania State Agricultural Society, at their office, in Harrisburg, on Thursday, the 26th of February, 1852. By order of the President,

ROBT. C. WALKER, Secretary.

For the Farm Journal.
Interesting¹ Experiments.

MR. EDITOR:—I send you below a short chapter of my experience in farming.

Some years ago, wishing to hasten the improvement of my land by extraneous manuring, and not understanding chemistry, I had to work for answers by experiments. The first one was in plowing down about three acres of oats after it was in head, and about the time it began to change color. The ground was sown with wheat along with the rest of the field, all of it having been manured alike from the yard.—There was no perceptible difference in favor of one part over the other. I considered the oats a total loss.

The next experiment was in plowing down buckwheat. On six acres of medium quality soil, I applied 240 bushels of lime, and sixty-six three-horse cart loads of stable manure. The ground was prepared and the buckwheat sown sometime in June.—It grew finely, and when in full bloom, and much of it from four to five feet high, I drew the harrow over it in the direction that I wished to plow; we followed with Wiley's iron plow, No. 76, which, by the by, is admirably calculated for that kind of work. While plowing it down, an aged neighbor, whose knowledge was drawn from observation and experience, assured me that it would not answer; that there was no good in it applied in that way. However, I wished to try and see for myself. I therefore finished the job and sowed it at the usual time with wheat. The appearance of the crop was never promising, and resulted in a decided failure. The wheat was evidently spoiled by the buckwheat.

My next experiment was with saw dust. A neighbor had a large heap of saw dust, which had been accumulating for several years, made chiefly from poplar and partly in a state of decay. This I purchased for \$5, and hauled it up in the winter on part of a sod field that I intended for corn. The dust was spread in the spring, and the whole field limed at the same time with from fifty to sixty bushels of lime per acre. I guessed that the lime might neutralize the acidity contained, and easily detected in the saw dust. It was all plowed down together, and the ground planted with corn. Shortly after it came up, that part growing over the saw dust assumed a yellow color, compared with the rest, and never grew so well. The result of this experiment was a loss of at least one-third of the crop on the dusted portion, which contained about seven acres.

The next experiment was in hauling out barn yard manure in the spring of the year—a thing that is rarely done hereabouts, unless it be a few loads for potatoes. I had seen it recommended somewhere on the authority of a distinguished farmer of New York, that manure so applied was worth as much to the succeeding or second crop, as if it had been left lay in

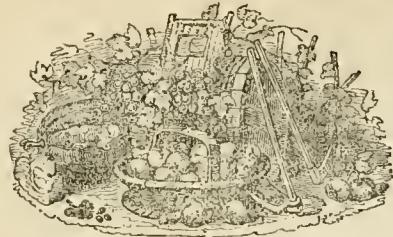
the barn yard during the summer. Seventy-five cart loads were applied to about five acres of sod ground, which was planted with corn. The corn crop was about doubled, I presume, in virtue of the manure. At the proper time the crop of corn was removed and shocked on a strip of sod ground, along one side of the field,—the stubs hoed off—the ground plowed and partly manured again, and the whole sowed with Mediterranean wheat. The result was a very heavy crop where the land had received a second application of manure, and a very light one where it had not. I cannot say whether there was a loss or gain in this trial. But there are difficulties in the way of applying stable manure on a large scale to spring crops with a view of securing the same ground in the fall, that cannot well be overcome, and will, I presume, always prevent it from being received into common favor. Hauling out and spreading would occur at a very busy period. The ground is generally too soft to haul over, and the manure much heavier than it is in autumn. Besides that, it makes a very heavy job in the fall, and must necessarily be done in a hurry, as the wheat should be sown about the time that the corn is fit to remove from the ground. Any considerable delay at that time from wet weather or any other cause, would generally be fatal to the wheat crop following.

I have generally sown clover with oats and plowed it down the following year for wheat, applying the stable manure to the same crop either before or after plowing down the clover. This appears to be an advantage to the wheat, but there are sometimes difficulties in getting it plowed at the proper time on account of dry weather. I am not sure that the gain in the wheat will compensate for the additional trouble and partial loss of the land, for it is not best generally to pasture it the same season after the oats have been removed. So far as my experience goes, there seems to be but little use in plowing down anything as food for crops, except stable manure, and that I apprehend had better be left on top. If there really is anything lost by evaporation from exposure, I have been unable, in a practice of more than twenty years, to discover it. On the contrary, manure so applied, has invariably done the best for me. If we can secure the solid and liquid parts of the manure, we can, I think, afford to let the gasses go for the benefit of the world at large. A. W. W.

Guthrieville, Chester co.

ADULTERATED TEA is becoming more common every day. There is scarcely a pound of good tea to be found; it is adulterated first in China, and then it undergoes a finishing process when it comes here.

EPITAPPI ON A RICH MAN.—“He lived—made money—and died.”



Horticultural Department.

For the Farm Journal.

The Circle of Fruits.

A few years since, Nursery catalogues were gorged with hundreds of names of good, bad and indifferent fruits, and the novice in fruit planting was completely bewildered by the array of hard words set before him "whence to choose." Public attention was called to this evil, and so well was it shown up, that as a consequence, we have now the other extreme:—one thinks half a dozen sorts quite enough, and another avers that there are not many more first rate varieties of any fruit (pears for example) known to promologists. An old gentleman remarked in my hearing the other day, that he could not see any use in planting more than three or four sorts, some for summer, and some for winter. This man has no idea of over-indulging himself evidently, his appearance proves it. Although owner of hundreds of rich acres, he was out on a "raw and gusty day" without mittens or boots, or even a comfortable coat. Unthankful, grudging, niggardly acceptance of God's bounties is a wilful affront to Divine Beneficence.

Health demands a free supply of ripe and seasonable fruit. A friend remarked the other day that he felt a want in the evenings which he could not for some time account for. He missed his evening dish of apples, and the loss affecting his digestion, rendered him uncomfortable during the day. One of the eldest and ablest physicians of our county says that apples and abstinence have been the only medicines he has used himself for many years.

It is natural to man to desire *change*. Variety is the spice of life. There are hundreds of palatable flavors of fish, flesh, fowl and vegetable, but there is not one among them, nor any half dozen to which we would be wholly confined. Much more, and more safely may we partake of every fruit "pleasant to the eye, and good for food," their flavors are mingled by the hand of Nature, and the more acceptable to the palate, the more wholesome they are. Only unripe, unseasonable fruits, are injurious, in the free and constant use of others there is no danger of excess.

But *how to have* a constant supply. Summer fruits are transient. Many desirable kinds last but a few days, and we must accept these or go without for a time, deprived of the relish of their peculiar quali-

ties. Many like to see a variety of colors, forms and flavors on the same dish, and choose to sip of this, and then of that, and there is no reason why this taste may not be indulged. To begin with Spring—who would not rejoice to have the benefit of a supply of refreshing, cooling, astringent cherries, during the first heats of summer, and who would prefer to wait for the latest, or having enjoyed the earliest would have none of the latest? Who would not choose to have some acid enough to stew, as well as some to eat from the tree; and who that has room to grow them would object to having two or three sorts glowing and laughing from the tree at one time? Besides that, in this case, there is a triple chance for an annual supply of one sort, if not of all.

As to *cherries* then; on account of the transient nature of individual sorts, and of the pleasure and enjoyment arising from variety and plenty, a cherry-grove should contain at the least, 12 different sorts, forming a succession from the last of May till August, and, when these are all in bearing, the possessor will rather add to the list other kinds than strike any out. Of apples, pears, plums, which extend over a longer season and have greater diversity of flavor and of uses, a still greater variety will be demanded.

It requires some skill and care to select a suit of varieties judiciously, each one must consult his own preferences for certain qualities of the fruits, and choose trees adapted in hardiness to his location. The Hand-Book advertised in your Journal gives a Table of maturity from which a list may be very conveniently framed. It should then be corrected by reference to the description of each particular sort.

Boalsburg, Dec. 26, 1851.

W.

For the Farm Journal.

Gooseberry.

MR. EDITOR:—Some years since I saw an article in some publication, how to treat gooseberry bushes to procure large and fine fruit. Having tried many different plans, but always without success, I naturally had very little faith in this new recommendation. Last spring, however, I made trial and the result, I must confess, disappointed my expectations most agreeably. I had large and fine fruit, free from mildew. Though I had been cultivating the gooseberry for more than twenty years, I never succeeded in procuring the fruit free from the mildew. The plan simply is, *to transplant the bushes every spring*. It ought to be done early, as the gooseberry is one of the earliest growers, and the ground should be made rich. In a year or two the roots become matted together, and the plants can be lifted with a ball of earth, attached to the roots, the same as if taken out of a pot. Whether this plan will continue to succeed, I am not at present prepared to say, from a single year's trial, yet it is sufficiently encouraging to persevere in the same course. If any of your read-

ers have gooseberry bushes (and no doubt there are many) the fruit of which is annually destroyed by mildew, I would suggest that they take a few of them on trial this spring, and report the result for the Journal. I will give the result of my experiment hereafter.

J. B. GARNER.

Floral Retreat, Jan. 13th, 1852.

For the Farm Journal.

Asparagus.

From the kind of stalks served up to Pittsburgh tables, and called "asparagus," one would naturally conclude our gardeners never read, and so there is no use talking to them; but somebody who does read, and likes this excellent vegetable, might take the trouble to tell them to salt their beds. Asparagus beds never require weeding, for there should be just as much salt put on them as to kill every vegetable except asparagus. The weeds should all be killed with salt; and then the soil is in proper order, if rich enough, to bear asparagus like hoe-handles. We this spring put half a peck of salt, and three or four inches deep of well rotted stable manure, on a bed two feet and a half square. The stalks shoot up there about as thick as an ordinary candle,—a dozen of them about every two days. They will not bear more than ten minutes' boiling; fifteen reduces them to a pulp. The asparagus is entirely free from that bitter pungent taste which resembles bad salad; and has that delicious flavor peculiar to itself.

MR. SPANGLER.—The above is taken from the *Pittsburg Saturday Visiter*, edited by Mrs. Swisshelm.—You will perceive that she is no novice, even in the garden. That she handles the *hoe* as well as the *pen*, you have an instance in the above paragraph.

Now, who is not a lover of asparagus, and who would not admire it placed on the table "like hoe-handles," instead of the kind of stalk generally seen, tough as leather three-fourths of their length?—The fact is, asparagus is a marine plant, and naturally grows near the sea-shore, where the soil is strongly impregnated with salt. But who ever before placed "half a peck of salt, and three or four inches of well rotted stable manure on a bed two and a half feet square?" Well, she is generally right, and I intend to try her plan, and would advise you, Mr. Editor, as you are going into the gardening line, to experiment on a part of your large bed, and give us the result through the Journal.

J. B. G.

Pennsylvania Horticultural Society.

The stated meeting of this Society was held in the Chinese Saloon, Philadelphia, on Tuesday evening, January 20th, 1852. E. W. Keyser, V. P., in the chair. Notwithstanding the severity of the weather, a number of objects were shown. Another beautiful flower of the *Victoria regia*, the thirty-eighth produced by Mr. Cope's plant. The bud was cut and brought in carefully protected from the intense cold, and when taken out, it expanded handsomely, and was a perfect specimen of smaller dimensions than those shown at recent meetings. A moss covered Urn displaying fine flowers and a large basket of choice varieties among which were a rarene of fragrant flowers of the *Stanhopea maculata* a rare

orchid and *Cypripedium venustum* from the President's hot houses. And three bouquets from other sources. Of fruits, there were dishes of Pears, the "Niles" variety from W. V. Pettit; the "easter beurre" from H. W. S. Cleveland, and a winter Pear from N. Lott, Reading, Pa. Of Apples, the "northern spy" from J. J. Thomas, Macedon, N. Y., and the "Keim" variety from C. Kessler, Reading. There was a large table of esculent vegetables from the garden of Miss Gratz.

The Library Committee presented their annual report on the condition of the library and a statement of its receipts and expenditures; and by which it appears there are now upwards of nine hundred and fifty volumes on appropriate subjects.

The special committee on nominations submitted a ticket of officers to be voted for at the annual meeting, and a report descanting fully on the subject of the President's determination to decline a re-election, announced a year ago, expressing regret thereat, and setting forth his meritorious services and showing the advantages he, by his liberality, has rendered to the cause of Horticulture in this community: likewise alluding to the course pursued by the Society on its profuse expenditure of means in its awards, and anticipating a hope that an association so useful may yet become the recipients of donations and legacies to enable it to establish what was originally contemplated, a *Botanic Garden*, ending with a recommendation, that a committee be appointed to devise some suitable testimonial to Mr. Cope in appreciation of the good he has effected.

A communication from R. Robinson Scott was read, the subject of his remarks was in relation to the award made to him of premiums at the last meeting for new plants with observations—he will pursue the subject on some future occasion.

The following premiums were awarded this evening by the committee on plants and flowers:

For the best design of cut Flowers, John Ellis, gardener to C. Cope; for the best bouquet for the hand to James Bisset, gardener to James Dundas; for the best basket formed of cut flowers, to John Ellis.

The Committee observed with much pleasure a fine flower of the *Victoria regia*, from Mr. Cope's houses.

By the Committee on Fruits:

For the best Pears, the "Niles," to Wm. V. Pettit; for the best Apples, the "Northern Spy," to J. J. Thomas.

The Committee noticed a very good specimen of Pears from Reading, called the Winter Pear, also the "Keim" Apple, both of good flavor and worthy of attention. Some specimens of the Easter Beurre were exhibited, which were passed prime.

By the Committee on Vegetables:—For the best display by an amateur gardener, to John Gallagher, gardener to Miss Gratz.

THOMAS P. JAMES,
Recording Secretary.

The annual meeting was organized by calling Mr. J. J. Vanderkemp to the chair, and appointing J. E. Mitchell, Secretary. James D. Fulton and Dr. G. Watson, acted as tellers. The election for officers resulted as follows:

President—Gen. Robert Patterson.

Vice Presidents—Jas. Dundas, Joshua Longstreth, E. W. Keyser, Dr. Wm. D. Brinckle.

Treasurer—John Thomas.

Corresponding Secretary—Tho. C. Percival.

Recording Secretary—Tho. P. James.

Professor of Entomology—S. S. Haldeman, A. M.

Professor of Botany—W. Darlington, M. D.

Professor of Horticultural Chemistry—Robert Hale, M. D.

THE FARM JOURNAL.

Assistant Editor's Department.

A. M. SPANGLER, ASSISTANT EDITOR.

Agents.

THE FARM JOURNAL may be had at the following places:—

W. B. ZIEBER, South 3d St., principal agent for Philadelphia.

W. H. SPANGLER, Lancaster, Pa.

B. F. SPANGLER, Columbia, Pa.

GEO. BERGNER, Harrisburg, Pa.

H. MINER, Pittsburg, Pa.

J. R. SHRYOCK, Chambersburg, Pa.

H. M. RAWLINS, Carlisle, Pa.

A. L. WARFIELD, York Pa.

and of Booksellers generally.

Our Office.

Those having business to transact with us will please call at the Book Store of W. H. Spangler, in North Queen street, Lancaster, where we or our representative will at all times be in attendance.

To old subscribers.

Frequent inquiries have been made of us recently, whether old subscribers will be permitted to renew their subscriptions at club prices. As a general reply to these inquiries, we answer, *most assuredly*.—Our terms now, are the same as formerly, and we indulge the belief that not only shall we retain our old friends, but that our club lists (with large additions of new names) will be renewed.

BACK NUMBERS.—We repeat the notice given in former numbers, that we can supply any or all of the back numbers of the first volume. If any of our subscribers have failed to receive them regularly, we will, if advised of it, cheerfully supply any deficiencies.

TO CORRESPONDENTS.—We have on file a number of excellent communications, which have been unavoidably crowded out by a press of other interesting matter. We are led to indulge the hope, that our readers will avail themselves of this season of leisure to the farmer, to write out facts for the forthcoming numbers of the Journal. Every man's experience is valuable, and every farmer in the State is competent to furnish something to enrich our columns. We care not how plainly these articles may be written, as we ask not for polished essays, but for plain facts. Give us the facts in your own language, and we will prepare them for publication.

VALUABLE FARM FOR SALE.—The attention of those desirous of purchasing Virginia lands, is directed to the advertisement of Mr. Bolling, of Petersburg, Va. who offers Sandy Point farm for sale. This is said to be a most valuable and desirable property.

DR. BRINCKLE'S ESSAY ON ENTOMOLOGY.—We ask the earnest attention of every reader of the Journal to the able and at the same time highly valuable and interesting essay of Dr. Brinckle on Insects. The importance of this subject to the farming community generally, has not heretofore claimed the attention it should have done. We are led to hope, however, that the familiar, yet scientific manner in which the able author has treated it, will induce many who have hitherto regarded it as of trivial importance, to study it more closely, and by their observations, aid in the extermination of what is a rapidly increasing foe to the farmer. We can only regret that the late hour at which the essay was received, prevented us from giving it entire in the present number.

A Word to our friends.

With the next number closes the first volume of the Farm Journal. In retrospecting the events of the past year, we cannot repress a feeling of honest thankfulness for the very cordial and encouraging support extended to our undertaking. We entered the field almost alone. All commended the enterprise, but few had faith in its ultimate success. All agreed that Pennsylvania farmers ought to support an agricultural journal of their own, but few believed they would. Encouraged by a small number of confident friends, we launched our craft, and trusted to the generosity of the friends of agriculture throughout the State, to save it from being wrecked. With the issue of the first number came new friends. The skies brightened. Words of good cheer from good men encouraged our hearts, and with each succeeding effort to win for it an honorable position amongst the agricultural periodicals of our country, came renewed and multiplied expressions of favor, until at length we felt that we had sufficient support to insure its permanency.

Another number closes our first volume and we assure our readers that we shall enter upon the second with a hopeful though trembling heart. A thousand vague fears beset us. Has the Farm Journal met the expectations of those who have kindly aided in giving it an existence? Will the efforts of those who interested themselves in its behalf when in its infancy and so essential to its future prosperity, be again put forth, or will they be relaxed, and we compelled to struggle on with the cheerless prospect of a bare existence before us. Ours has never been a desponding spirit. We may not have succeeded in making the Journal what it should be, although we did all we could; but we are consoled by the idea that "the world was not made in a day," nor should it be expected that in a single year it is possible to give our publication the high character at which we aim. Believing, and believing confidently, that those who stood by us in the beginning will not forsake us now, we appeal to them again for their generous aid. Will not those who

furnished us with club lists, do so again? We do not like to promise much, fearing our ability to fulfil; but if enlarged experience, increased facilities, and the assurance of strong support for our columns from a host of excellent men will be taken as a guarantee, we think we may safely promise that the next volume of the Farm Journal will approximate a little more closely to the standard of excellence we desire it to attain, than that which is about closing. Is this sufficient? If so, friends of agriculture, commence the good work. Let us enter upon the new volume knowing that we shall be sustained. Let us feel that we have your approbation, and though we realize nothing more than the mere expenses of publication, we shall have the consciousness that our efforts to build up the character of Pennsylvania agriculture, if not profitable to ourselves, may have been so to others.

Culture of the Upland Cranberry.

A correspondent asks, "whether the Cranberry may not be successfully cultivated on upland." The practicability of growing the Cranberry on high land has been satisfactorily shown, by the success which has attended the effort wherever properly made. In the New England States, great attention has been given to the subject, and the result has settled the question beyond a doubt. Mr. Sullivan Bates of Bellingham, Massachusetts, gathered 400 bushels from a single acre, and other cultivators have been equally successful, though we do not believe that this quantity is to be regarded as an average yield, nor indeed is it necessary that it should be in order to render the culture of the upland Cranberry a matter of profit. Cranberries command from \$1.50 to \$3 per bushel, and as those grown on upland are said to be much larger than the Swamp berries, and equally well adapted to culinary purposes, there appears to be a decided advantage in cultivating the former.

The culture of the Cranberry is simple, and attended with but slight expense. A clay soil mixed with a sufficient quantity of sand to prevent its baking, seems best adapted to its growth. Any soil that is suitable for the Strawberry will answer for the Cranberry, and as it is propagated both by runners and seed, there is little difficulty in growing them, if a proper begining is made.

The land intended for Cranberries should be plowed, and if a quantity of swamp muck is applied so much the better. It should then be thoroughly harrowed, and the plants set out in drills from eighteen to twenty inches apart. Some hoeing will be necessary the *first* season, after which they require no cultivation. A very rich soil is not necessary. Mr. Bates contends that the soil should be so poor, that nothing will grow upon it to obstruct the growth of the Cranberry, and to accomplish this he recommends the removal of the top soil.

We have frequently seen the Cranberry growing wild, but never under cultivation, and are compelled therefore to glean our information in regard to the proper mode of culture from other sources. We have however, not the slightest doubt that they will succeed well on upland, and would be glad to see them introduced into Pennsylvania, as we regard it as a valuable and delicious fruit.

ROCKLAND.—We are pleased to state that in our next number we shall present our subscribers with a handsomely engraved portrait of the first premium Durham bull "Rockland," the property of James Gowen, Esq., of Mount Airy, Philadelphia county. Rockland is perhaps one of the finest animals in the State, and we hope to follow up his portrait with others of a similar character.

FANNING MILLS.—Among the many excellent Agricultural implements exhibited at the State Fair, was a large variety of Fanning Mills, manufactured in in our own and the adjoining States, embodying all the recent improvements. The display was large, and no portion of the implement department attracted so much attention. A fair and impartial trial was given each, and resulted in the award of the first premium to Jesse Roberts, of Norristown, Montgomery county, Pa. This mill possesses many excellent qualities and attracted great attention, in regard to the simplicity and completeness of its machinery, as well the excellence of the work performed by it,—For a more particular description we refer our readers to Mr. Robert's advertisement.

Bamborough's celebrated mills were also on exhibition, and were awarded a diploma, the committee considering them of almost equal excellence with Robert's. The same compliment was paid to Grant's mill, exhibited by Messrs. Prouty & Barrett. A number of other Mills of high merit were on the ground, which the committee mentioned as worthy of praise. These were exhibited by Whitman & Co., of Baltimore; Montgomery & Bro., Lancaster; Lanphear & Jeffries, Lancaster; S. N. Lacy, Wyoming co.; C. Schreiner, Cumberland co.; J. Behel, Juniata, and E. Watkins, Washington county.

LANCASTER COUNTY AGRICULTURAL SOCIETY.—The annual meeting of this society was held on Tuesday, January 13th. The attendance was large and respectable, and a deep interest manifested by all present. The annual address was delivered by James Gowen, Esq., and is said to be a most valuable contribution to the cause of agriculture. It is shortly to be published in pamphlet form by the society, when we will be able to speak more fully of its merits.—Much to our regret, the blocking up of the rail roads by the snow, prevented us from reaching home in time to hear it delivered.

Book Notices.

Lessons in Modern Farming, or Agriculture for Schools: containing scientific exercises for recitation and elegant extracts from rural literature, for academie or family reading, by Rev. Jno. L. Blake, D.D. Mark H. Newman & Co., New York. For sale by Lindsay & Blakiston, Philadelphia.

The importance of agricultural education has been so much dwelt upon of late, that it is scarcely necessary for us to point out its claims now. The conviction that the son of the farmer should receive an education analogous to that provided for young men designed for the liberal professions, is daily strengthening. There are those, and perhaps the greatest number, who advocate the establishment of agricultural colleges. While we heartily second their efforts and trust that the day will come when such institutions will abound, it is very evident to us that the day has not yet arrived. There are certain preliminary steps necessary, which have not been taken.—However favorable public opinion may be to the establishment of such institutions, it is apparent that to put them into successful practical operation will require mightier energies than can be brought to bear upon them now. To the rising generation—the youthful yeomanry of the land—we must look for help, and in order to interest them sufficiently, it is necessary that the importance of scientific agriculture be inculcated into their minds at an early age, and the means to be used for the accomplishment of so desirable a result, must be placed within the reach of all. If it be asked how this may be done, we answer, through the *Common Schools of the Commonwealth*. Agriculture must be made a branch of study, so that every youth in our State who is destined to become a farmer, may have the great leading principles of his intended profession instilled into his mind at an early age. If it be urged, that competent teachers could not be procured, we meet the objection by asserting that so soon as it is ascertained that a general knowledge of the principles of agriculture is a necessary qualification of a teacher in the public schools, just so soon will teachers make it a study, as they are compelled to do the different branches of arithmetic, grammar, &c. The work before us is eminently calculated to promote this object, and we indulge the hope that those who have charge of our public schools will see the importance of giving to this subject the attention it so richly deserves.

Address of Peter A. Browne, L.L.D., before the Agricultural Society of Bucks county, Pa., Oct. 1, 1851.

This is a well prepared and useful address by an author well known to agriculturists by his writings upon wool. It traces the rapid growth of the flourishing county of Bucks; contrasts the condition of the American farmer with the system of "white sla-

very" practised by the English in Ireland, gives various statistical and historical facts of much interest to the citizens of the county, and includes some suggestions for the advancement of agriculture. The extent to which matters of local interest are treated is worthy of imitation on similar occasions, when the local audiences of county societies are addressed.

Woman in her various Relations, containing practical rules for American females, &c., by Mrs. L. G. Abell, author of "Skilful Housewife," "Gems by the Wayside," &c. William Holdredge, New York.

The readers of the Journal will recognise in the author of this neat volume, one of our most esteemed contributors. We have examined its pages with feelings of deep interest, containing as they do, a mass of valuable hints upon subjects with which every woman should be familiar. It is designed to bring before the women of our country, in their true colors, the weight and importance of the duties and responsibilities resting upon them, and with such a noble mission in view, we wish this excellent book God speed, earnestly hoping that the well directed efforts of its gifted author may be properly appreciated, and produce their desired results.

A Catechism of Familiar Things; their history, and the events which led to their discovery. With a short explanation of some of the principal natural phenomena, &c. Lindsay & Blakiston, Philadelphia.

A most excellent volume containing a mass of valuable and reliable information upon subjects which enter into the daily concerns of life. We have examined its contents, and with honest sincerity recommend the volume to the attention of our readers in general, and of parents and teachers in particular.—It is just such a work as every man who desires a general knowledge of useful things without the fatigue of wading through large volumes to find it, will need.

The United States, its Power and Progress, by Guillaume Tell Poussin, late Minister of the Republic of France to the United States. First American from the third Paris edition. Translated by E. L. Du Barry, M. D., Surgeon U. S. Navy. Philadelphia, Lippincott, Grambo & Co.

Every thing relating to the advance of our national greatness, is a matter of interest to the American reader. The author, for many years a resident of the United States, had ample opportunities for observation and inquiry, the result of which is the volume before us, embodying much valuable information in relation to the progress we, as a nation have made in agriculture, commerce and manufactures, and the degree of power we have reached. It abounds in statistical information of much importance to the general reader, as well as many interesting observations on the practical working of our republican institutions.

The Practical Cook Book, containing upwards of one thousand recipes, consisting of directions for selecting, preparing and cooking all kinds of meat, fish, poultry and game, soups, broths, vegetables and salads; also for making plain and fancy breads, pastries, puddings, eakes, creams, &c., together with various miscellaneous receipts, and numerous preparations for invalids, by Mrs. Bliss, of Boston.—Philadelphia, Lippineott, Grambo & Co.

This useful volume is presented to the public as the result of many years *practical* experience, in the various departments of which it treats. While the country is flooded with books relating to culinary matters, but few of the many yet published are sufficiently practical in their character for general use. Mrs. Bliss' work is an exception to this rule, and from an examination of its contents we cannot but think that it will prove a most valuable acquisition to every family library.

Littell's Living Age. Boston, E. Littell & Co.

We have for some time past, been in receipt of this excellent journal. For spirit and freshness it is undoubtedly the leading periodical of the day. Its readers are furnished weekly with the specie of the foreign Reviews, &c., embodying a valuable exposition of the current literature of the English language. The selections are, generally speaking, of a solid and substantial character, and as such eminently adapted to the tastes and wants of the American reader. The plan of the work is such as to commend it to all, and we are pleased to learn that the enterprising publishers are meeting with the encouragement they so richly deserve.

The Model Architect, No. 7. E. S. Jones & Co., Philadelphia.

This fine work continues to improve in character as it progresses. We again commend it to those who desire an excellent work on rural architecture.

B. P. JOHNSON, Esq., of Albany, will please accept our thanks for five bound volumes of the Transactions of the New York Agricultural Society, from 1846 to 1850 inclusive. These volumes are noble evidences of the interest manifested by the people of New York on the great subject of Agriculture.

BENEVOLENCE is daily more and more generally acknowledged as the true rule of conduct. The maxim, "Live and let live," will soon be superseded by a still nobler principle of action, "Live and help live."

ALDERNEY AND IMPROVED SHORT HORN CATTLE.

THREE thorough bred Alderney BULLS, from nine to eleven months old, raised from the choicest imported stock. Also, two thorough bred young short horn BULLS, ten months old, raised on the farm of Mr. J. F. Remington, near Philadelphia, and for sale by AARON CLEMENT, Agent for the purchase and sale of improved stock, Cedar street, above 9th street, Philadelphia.

February 2d, 1852.

HIGHLY IMPROVED ESTATES AND VALUABLE TIMBER LAND,

On Lower James River, For Sale.

THE undersigned, prevented by engagements, requiring his undivided attention elsewhere, from residing on his estate, will sell publicly, (unless previously sold privately, of which due notice will be given,) before the Bollingbrook Hotel, in the city of Petersburg, Virginia, at 11 o'clock, on Wednesday, the 26th day of May next, without reserve or regard to weather, that valuable body of highly improved arable and heavily timbered land, extending up the north side of James river, from the Chickahominy river, in the county of Charles City, Virginia, about 5 miles, well known under the general designation of SANDY POINT. This estate lies 32 miles below Petersburg, 45 miles below Richmond, and about 65 above Norfolk, in what is justly considered the finest and most extensive grain growing region of Virginia, and as healthy as any on tide water. Spring and well water abundant and good. The whole tract contains 4,454 acres of unsurpassed natural quality, of which 2,150 have been thrice limed, and are now in a high and successful state of cultivation, upon the five field rotation, with more than 500 acres well set in clover. The balance chiefly in wood and timber, embracing a body of some of the best timbered land in Eastern Virginia, convenient to good navigation. Marl abounds on the river, and Stone Lime of excellent quality is 6 1-2 cents per bushel.

The sub divisions are as follows—

THE NECK—contains 981 acres, 551 limed, clovered, and in a high state of cultivation; 168 in wood and timber, and 2 1/4 meadow or marsh land well meadowed and reclaimable at small expense. A valuable winter Fishery belongs to this farm. BUILDINGS—A small new frame dwelling, smoke house, negro houses, stable and large barn, with stationary horse power and shelter.

LOWER TEDDINGTON—contains 831 acres, 550 limed, clovered, &c., 229 principally in wood and timber, and 2 1/4 in reclaimable meadow. BUILDINGS—A new frame dwelling with 4 rooms and a passage, negro houses, a large and well arranged barn, with stationary horse power and shelter; two large stables for horses, oxen, &c., extensive hay house and spacious and well arranged buildings, for the protection of wagons, carts and all farm implements, &c.

UPPER TEDDINGTON—the Family Residence. Contains 775 acres, 532 limed, clovered, &c., 229 principally in wood and timber, and 11 in reclaimable meadow. BUILDINGS—a commodious wooden dwelling, large two storied kitchen and laundry, ice house, new and spacious carriage house and stable, servants' houses, &c., &c. Also, a new Barn, part wood and part brick, with 4 floors, 80 by 35 feet, and a wing 30 by 50 feet, with bone, plaster, saw and grist mills. In the barn there is all the necessary machinery for threshing and winnowing wheat, shelling and grinding corn and sawing timber, all effectually driven by a 16 horse power stationary engine in complete order and condition. A large orchard stocked with every variety of fruit, in successful bearing is attached to this farm.

UPPER QUARTER—contains 836 acres, 546 limed, clovered, &c., 290 principally in wood and timber. BUILDINGS—A small frame dwelling, kitchen, laundry, smoke house, negro houses, barn with stationary horse power and shelter and stable.

Each of the above four farms has a river front, with landings, at which wharves can be erected cheaply and conveniently if desired. To "Upper Teddington," within 100 feet of the barn, belongs a new, commodious and substantial wharf, at which the largest size vessels lie, steamers, sea and river, pass twice a day, frequently oftener, plying between Petersburg, Richmond, Norfolk, Baltimore, Philadelphia and New York.

In addition to the above described four farms and timber and wood land thereto attached, are the following valuable timber and wood lots eligibly situated, convenient to navigation, which will make farms as desirable and productive as those above described:

No. 1, containing 215 acres; No. 2, 193 acres; No. 3, 244 acres; No. 4, 223 acres; and No. 5, 147 acres.

Mr. Nicol, residing at Sandy Point, will be prepared to show the property in my absence, and a particular and thorough examination is invited at any time previous to the day of sale. Accurate plats of each sub-division have been prepared and are ready for inspection. Possession of the timbered lands given immediately after the sale; of the farms at the end of the year, with the privilege previously, of fallowing and seedling wheat.

TERMS.—For the farms, one-fifth cash, the balance in five equal annual instalments from the 1st January, 1853. For the timbered lands, one-third cash, and the balance in three equal annual instalments from day of sale. The credit payments to bear interest and to be secured by deeds and bonds, or notes with approved securities or endorsers.

Petersburg, Virginia, February, 1852.

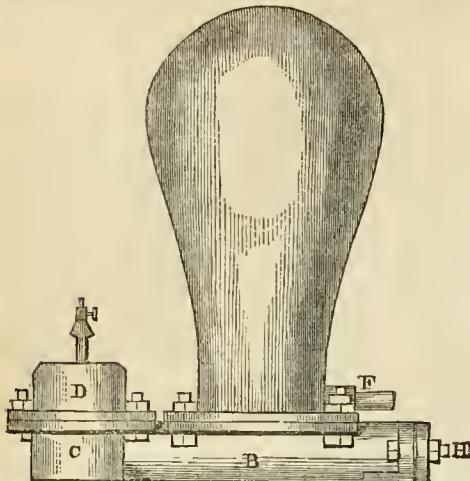
WM. PANNILL & SONS, Anctrs.

FRUIT AND ORNAMENTAL TREES FOR SALE.

50,000 Peach Trees of one and two years growth, from the bud! 40,000 Apples; 5,000 Cherries; 5,000 Dwarf Pears, each containing all the most esteemed varieties, and of large size. Also, Quinces, Plums, Nectarines, Apricots, Almonds, Grapes, Raspberries, Gooseberries, Currants, Strawberries, &c., &c. 50,000 Silver and Ash-leaved Maple Seedlings of one years growth; 50,000 Apple Seedlings. The above will be sold on the most reasonable terms. Persons residing at the south and west should send their orders early. Catalogues with prices annexed will be sent to all applicants.

ISAAC PULLEN,

February, 1852—2 mos.) Highstown, Mercer Co. N. Jersey.



A. an air chamber—B. body of ram—C. valve chambers—D. valve—F. coupling for delivery pipe—H. coupling for driving pipe.

J. B. CHICHESTER,

NO. 23, SOUTH EIGHTH STREET, PHILADELPHIA.

AGENT for Birkinbines Patent Improved Hydraulic Ram, Force Pumps, Street Stops, Fire Plugs, and Hydraulic Machinery in general.

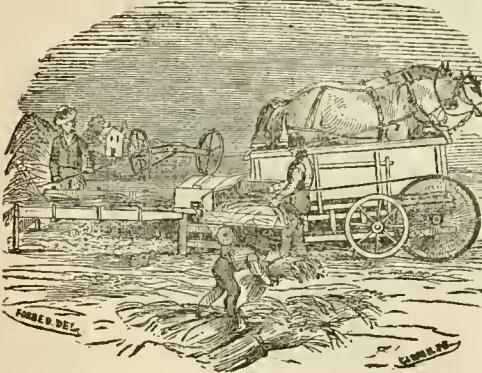
The superiority of these Rams over all others is the great amount of water thrown to that wasted, the large size they can be constructed, the durability of them, as well as the small amount of attention and repairs they require—many running at present for 4 and 5 years, without any repair. At the present time there are in the United States, Cuba, Mexico and South America, about 2000 in successful operation.

The town of Naples in the State of New York is supplied with water by one of these Rams, throwing 20,000 gallons a day. Many more could be mentioned if space would permit.

Persons wishing Rams sent to them by measuring the amount of water their brook or spring affords, per minute, the head and fall they can procure, the elevation to be overcome, and distance to be conveyed, can have the proper Ram and Pipe sent them, with directions for putting up.

The expense, in most cases, is smaller than a well and pump. Letters post-paid, will meet with prompt attention. When desired an experienced person will be sent to put them at a small additional expense. Lead and Iron Pipe for sale. These Rams are warranted in every respect.

(Jan. 1852.)



WHEELER'S PATENT

Pennsylvania State Agricultural Society's First Premium Railway Chain Horse Power and Over-shot Thresher and Separator.

THESE Machines were awarded the first Premium (of \$10,) and a Diploma at the Pennsylvania State Agricultural Exhibition, in competition with many others, and they have also received the first (or a moned) Premium at all the County Fairs wherever they have been exhibited for Premium in the State of Pennsylvania, and numerous premiums in other States. To show the public that these Machines are none of the humbugs of the age,

I WILL PAY ONE HUNDRED DOLLARS
as a premium to any person who can produce a superior Horse

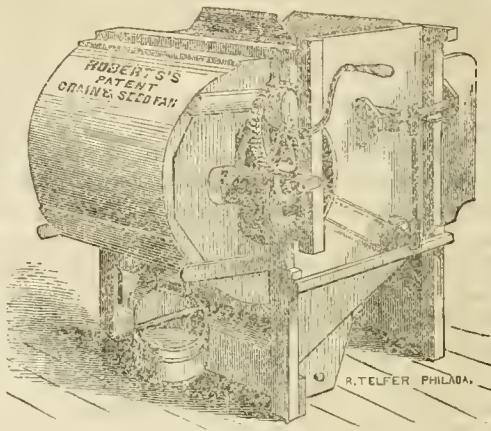
Power and Threshing Machine for general purposes and to do more work with the same amount of labor, in any given time.

For more detailed explanation, see *Farm Journal* of August, 1851, or address the subscriber, at Harrisburg.

M. H. STEEVER.

Harrisburg, February, 1852.

2mos



IMPORTANT TO FARMERS!

JESSE ROBERT'S PATENT UNITED STATES GRAIN AND SEED FAN.

TO WHICH WAS AWARDED THE FIRST PREMIUM

At the Pennsylvania Agricultural Fair, after a trial the fairness of which could not be disputed. These Fans, the inventor confidently asserts, are the only ones now in use entirely adequate to the wants of the farmer. The object of the inventor was not directed alone, to the purpose of cleaning grain, but of cleaning it and saving at the same time the farmer the trouble of gathering it from the floor, thus not only avoiding labor, but keeping the grain from the dirt on the floor. In addition to this, these Fans, possess greater advantages than those constructed upon the old plan. These advantages are as follows:

First. The arrangement is such, that a quick shake can be obtained by turning slowly, thus securing when desired, a less quantity of small seeds.

Second. When necessary a slow shake can be secured, by rapid turning. This is of immense advantage, as it adapts the fan, to the cleaning of all kinds of seeds.

Third. A new method of adjusting the riddles and screws. This gives the operator the advantage of placing them in any position best adapted to accomplish the purposes of a grain Fan. Every riddle and screen has a separate adjustment, so that each one can be fixed at any angle without the necessity of taking them out.

Fourth. The grain, instead of falling on the floor, as is usually the case, is discharged, by means of a small trough, into the half bushel, or other measure that may be placed under it. By this arrangement the grain is all measured, by the time it is cleaned, thus saving not only labor, but time, and consequently expense, as well as keeping the grain from contact with the dust and dirt on floor. For this reason, the fan, can be put in operation anywhere, with as little trouble as the common fans can be used in a barn floor.

Fifth. The simplicity of their constructions renders them less liable to get out of repair than other mills.

For the above reasons, we confidently recommend our Fans to public patronage. Privileges to manufacture will be granted on reasonable terms. Satisfactory information can be promptly had by addressing *post paid*, the subscriber at Norristown, Montgomery co., Pa.

JESSE ROBERTS.

Norristown, December, 1, 1851.

9-tf

Seed and Agricultural Warehouse.

No. 29, Market Street, Phila.

WHERE the subscriber has onced an extensive assortment of GRASS AND GARDEN SEEDS, of his own raising, or recent importation, and warranted to be as represented.

He is, also, manufacturing all the most approved Agricultural Implements, among which he would call the attention of Farmers to a new article of Plow, of his own invention, called Cast-Steel, Extending Point, Self-Sharpening, Surface and Subsoil Plows, which for durability and easy of draft is yet unequalled.

The great advantages these Plows possess over all others, are their peculiar construction and the substitution of Cast-Steel in the place of Cast-Iron, which only wants to be seen to be appreciated; all of which will be sold on the most reasonable prices by

May, 1851.

C. B. ROGERS.

FARMERS PROTECT YOUR HOUSES & BARNs.

So many accidents have happened from lightning during the past summer, that every prudent and careful farmer should at once adopt such means as will be most effectual in preventing them—When it is remembered that certain safety may be secured at a very trifling expense, it becomes the duty of every farmer and good citizen to avail himself the proffered means. By so doing, he not only secures his property from fire by lightning, but protects also his family and those around him. These are important considerations and should have great weight. Those who desire a Lightning Rod, pronounced by the first Scientific men in our country, the very best in use, will find it on application to THOS. ARMITAGE, at his Magnetic Lightning Rod Factory, Vine Street 3 doors above 12th, Philadelphia. These Rods are finished with al, the improvements at nearly the same prices as the old kind. (11.)

PAGE'S CIRCULAR SAW MILLS.

GEORGE PAGE & CO.

Shroeder street, between Baltimore and Fayette sts.,
Baltimore.

Manufacture to order, Page's celebrated Portable Patent Circular Saw Mills, with horse or steam powers, of several sizes. They also manufacture Sawing and Planing Machines for railroad work, Thrashing Machines, GRIST MILLS for farm purposes, Corn and Cob Crushers, Tenoning Machines, SEED AND CORN PLANTERS, IMPROVED HORSE POWERS, CORN SHELLERS, Augers for boring wells, augers for boring fence posts, water wheels, forcing pumps, &c.

They respectfully solicit a share of public patronage, and would be permitted to remark, that their Circular Saw Mill can do more work—aye, twice as much work as any other mill with the same amount of power, and do it better.

(sept-9)

PHILADELPHIA & LIVERPOOL LINE OF PACKETS—To sail from Philadelphia on the 15th, and from Liverpool on the 1st of each month.

From Phila. From Liverpool.

Ship SHENANDOAH	{ April 15th	June 1st
Capt. W. P. Gardiner.	{ Aug. 15th	Oct. 1st
	{ Dec. 15th	Feb. 1st
New ship WESTMORELAND	{ May. 15th	July 1st
Capt. P. A. Decan,	{ Sept. 15th	Nov. 1st
	{ Jan. 15th	Mar. 1st
New ship SHACKMAXON,	{ June 15th	Aug. 1st
Capt. W. H. West.	{ Oct. 15th	Dec. 1st
	{ Feb. 15th	April 1st
Ship MARY PLEASANTS,	{ July 15th	Sept. 1st
Capt. R. R. Decan,	{ Nov. 15th	Jan. 1st
	{ March 15th	May 1st

The above first class ships are built of the best materials, and commanded by experienced navigators. Due regard has been paid to select models for speed with comfort for passengers. They will sail punctually on the days advertised, taking advantage of the steam tow boats on the Delaware.

Persons wishing to engage passage for their friends, can obtain certificates, which will be good for twelve months.

Passage to Liverpool in the cabin,	\$80
“ “ Forward cabin,	20
“ “ Steerage,	12
Passage from Liverpool in the cabin,	100
“ “ Forward cabin,	25
“ “ Steerage,	20

Those who wish to remit money, can be accommodated with drafts for £1 sterling and upwards, at sight, without discount. Apply to GEO. McHENRY & CO.

June 1, 1851. 37 Walnut street.

R. BUIST,

NURSERYMAN & SEED GROWER,

HAS always on hand at his seed Store, 97, Chestnut Street, Philadelphia, a large stock of Seeds of his own growth, a very important item to purchasers, as he is a practical grower, and has been engaged in his profession over 30 years. His nursery ground is amply stocked with Fruit, Shade and Ornamental Trees, accurately named and properly cultivated. Every article sold at the lowest rates, and warranted to be as represented.

Seed Store, 97 Chestnut Street, Philadelphia. Nurseries and Seed Farm, Darby Road, two miles below Gray's Ferry.

June 1, 1851. R. BUIST.

HENRY L. TRIPLER,

(Successor to Joseph P. H. Coates.)

Dealer in Grass and Garden Seeds.

No. 49, Market Street, Philadelphia.

JOURNAL OF THE FRANKLIN INSTITUTE,
of the State of Pennsylvania, for the promotion of the
Mechanic Arts.

THE oldest Mechanical Periodical extant in America is published on the first of each month in the City of Philadelphia. It has been regularly issued for upwards of twenty-five years, and is carefully edited by a committee of scientific gentlemen appointed for the purpose, by the Franklin Institute.

The deservedly high reputation, both at home and abroad, which this Journal has acquired and sustained, has given it a circulation and exchange list of the best character, which enables the Committee on Publications to make the best selections from Foreign Journals, and to give circulation to original communications on mechanical and scientific subjects, and notices of new inventions; notices of all the Patents issued at the Patent Office, Washington City, are published in the Journal, together with a large amount of information on Mechanics, Chemistry, and Civil Engineering, derived from the latest and best authorities.

This Journal is published on the first of each month, each number containing at least seventy-two pages, and forms two volumes annually of about 432 pages each, illustrated with engravings on copper and on wood of those subjects which require them.

The subscription price is Five Dollars per annum, payable on the completion of the sixth number; and it will be forwarded free of postage when five dollars are remitted to the Actuary (postage paid) in advance for one year's subscription.

Communications and letters on business must be directed to "the Actuary of the Franklin Institute, Philadelphia, Pennsylvania," the postage paid.

WM. HAMILTON,

Actuary, F. I.

TO FARMERS, PLANTERS,

MARKET GARDENERS & OTHERS. PREPARED OR ARTIFICIAL

GUANO—Manufactured only by KENTISH & CO.
Depot No. 40, Peck Slip, New York.

THIS manure is so combined, that the Ammonia and other fertilizing gases are absorbed, fixed, and are given out to vegetation only as it requires them. No rot, mildew, worm, fly or other insect can approach it: an important consideration to farmers generally, but particularly in potato planting. It will be admirably adapted to the renovation, restoration and fertilizing of such lands as have been worn out.

It may be used broadcast, after the ground is ploughed, and then harrowed in with the seed. It is also valuable as a top dressing. Six acres per day can be thus manured in a day by one man.

It may be used with the greatest advantage on Corn, Potatoes, Wheat, Tobacco, Garden Vegetables, Rye, Oats, Green House Plants, Flowers, Vines, Wall Funit, &c., and more than a thousand certificates from the most celebrated Farmers and Gardeners, can be shewn, all testifying in the highest terms to its great value as a fertilizer. A pamphlet containing these certificates can be had, by applying to the manufacturers. THE PRICE IS ONLY ONE CENT PER POUND. It is put up in bbls. averaging 235 lbs., or in casks, from 1000, to 1400 lbs.

TERMS, Cash, or approved credit on delivery. Persons wishing to buy the article to sell again will be allowed a liberal commission. Address KENTISH & CO.
Aug. 1, 1851.

No. 40, Peck Slip, New York.

AGENCY

for the purchase and sale of improved breed of
Animals.

STOCK Cattle of all the different breeds, sheep, swine, poultry, &c., purchased to order, and carefully shipped to any part of the United States, for which a moderate commission will be charged. The following are now on the list, and for sale, viz:

Thorough bred Short Horns and Grade Cattle.

do	Dorset	do	do
do	Ayrshire	do	do
do	Devons	do	do
do	South Down Sheep,	do	do
do	Oxfordshire	do	do
do	Leicester	do	do

Swine and Poultry of different breeds. All letters post paid will be promptly attended to. Address AARON CLEMENTE,
August 1, 1851.

Cedar st., above 9th. Phila.

GUANO AND PLASTER.

THE subscribers offer for sale at the lowest market rates, 1000 Tons Dry Patagonia Guano,
500 " Government Peruvian Guano,
500 bbls. Ground Plaster.

The quality of the above is unsurpassed, and can be recommended with confidence to farmers and others in want of the articles. A liberal deduction made to Country Merchants.

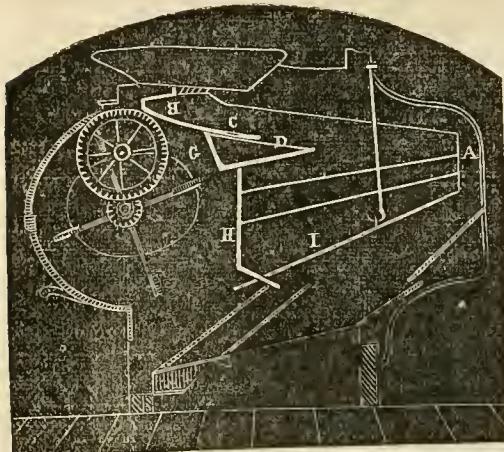
ALLEN & NEEDLES.

No. 22 & 23, S. Wharves, First Store above Ches. st., Phila.
July 1.

74m-

BERKSHIRE PIGS and South Down Sheep of Pure Blood, for
sale by JAS. THORNTON, Jr.
July 1-6m.

Byberry, Philadelphia Co.



MONTGOMERY'S UNRIVALLED IMPROVED ROCKAWAY SCREENER.

This celebrated FAN has been thoroughly tested and found to excel all others now in use for cleaning the different kinds of grain.

This improvement by Montgomery & Brother, consists in a double shoe—the larger shoe—A as commonly attached to winnowing machines, having grooves into which the screens, sieves or sieve boards are slid and rest.

B. The curved apron upon which the grain falls after passing through a hopper above.

C. The door which is made to extend across the curved apron B, and opening back on hinges towards the front end of shoe A, rests flat upon the front part of the apron B. The grain passes along the curved apron B and through the aperture of the door C and falls upon the screen D underneath. The apron is carried over the screen D on to the screen underneath, whilst the screenings pass through the screen D into the shoe G underneath, and are carried along the bottom of the shoe G to the centre, where a spout H receives the screenings and carries them down behind into a box below the bottom of the shoe A. The grain is carried back on to the grain board underneath perfectly screened.

The persons who have already used these GRAIN FANS have not only spoken in flattering terms of them, but prefer them to all others they have used—and very many of the best Agriculturists have given their certificates that the fact of these machines screening the grain twice by one and the same operation is the very improvement they have long desired. Our farmers will now have the most perfect winnowing machine, which spreads the grain over the upper screen more perfectly than any others now in use. This improvement is so valuable as to have induced the inventors and manufacturers to make application for Letters Patent.

All orders for the machines will be promptly attended to by the undersigned.

J. MONTGOMERY & BROTHER,
Lancaster city, Pa.

Sept. 1851.

THE FRUIT-GROWER'S HAND-BOOK.

Encouraged by the very warm commendations of this work, received alike from experienced Horticulturists and from the wholly inexperienced, the author ventures with some confidence to submit it to the public at large.

Notes of all the important questions on fruit culture asked of the writer during the last ten years, with a thorough research of Pomological works, have contributed to render this volume as complete as possible, in convenient compass.

To the lot-holder who wishes to make the most of a few plants and little room, as well as to the extensive planter who wishes to arrange and cultivate his gardens in the most economical and profitable manner, the Hand Book will be found a useful companion for frequent reference.

Price, FIFTY CENTS. Two copies, post free, for \$1.
Address, WM. G. WARING,
sept. 1851. Boalsburg, Centre co., Pa.

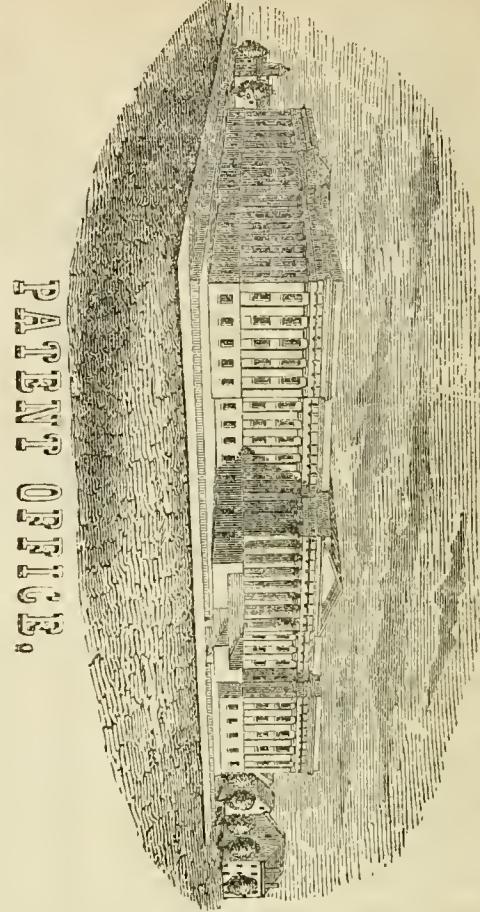
DOUBLE-ACTING, LIFT AND FORCE PUMPS

The subscriber manufactures Double-acting Lift and Force Pumps, of all sizes, for Factories, Mines, Railways, Water Stations, Breweries, Steamboats, Steamships, Tanneries, Ships, Water Boats, Hot Liquids, Family Purposes, &c.

VILLAGE AND FACTORY FIRE ENGINES.
Garden Engines, Cistern Pumps, Well Pumps, for any depth required, Hoses Couplings, Copper Riveted Hose of all sizes, Ornamental and Cast-iron Fountains, &c.

Purchasers are respectfully invited to call.
Any communications by mail will have immediate attention.

G. B. FARNAM, 34 Cliff st., near Fulton, N. Y.



PENNA. PATENT AGENCY OFFICE.

Inventors and others, having business to transact at the United States Patent office, are hereby informed, that the undersigned will attend promptly to all business connected with said office, and will complete Perspective and Sectional Drawings, and all required papers, Caveats, Specifications, Disclaimers, Assignments, &c. and make the proper applications for the securing of Letters Patent, according to law.

MACHINISTS AND INVENTORS

will save time, trouble and expense, by first consulting him, and the strictest secrecy will be observed, relative to their inventions and claims.

The office is at present located in Centre Square, two doors south of the Lancaster Bank, where the list of patents granted since the year 1790 to the present day can be examined, together with numerous specifications, drawings and models, and every information obtained relative to the laws and rules of the U. S. Patent office.

All the requisite papers, drawings and models will be promptly and carefully forwarded to Washington city, free of charge by J. FRANKLIN REIGART, Lancaster, Pa.

Life Insurance for Horses, &c.

THE American Live Stock Insurance Company, (Stockholders individually liable) for the Insurance of Horses, Mules, Prize Bulls, Sheep, Cattle, &c., against Fire, Water, Accidents and Disease. Also, upon Stock driven to Eastern markets, or transported South.

JOHN H. FRICK.
General Agent for Pennsylvania, Philadelphia.

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JOHN ZIMMERMAN, Lancaster Pa.

CHARLES F. FRICK, Reading, Pa.

SAMUEL H. TAYLOR, Mauch Chunk, Pa.

Dr. JOHN G. SCOVEN, Veterinary Surgeon,
May, 1851.) Examiner for Lancaster County.

W. B. WILEY, Job Printer Lancaster, Pa.

FRUIT & ORNAMENTAL TREES, &c.

The subscribers solicit the attention of Nurserymen, Orchardists and Amateurs, to their present large and fine stock of Nursery Articles:

STANDARD FRUIT TREES, for Orchards; thrifty, well grown, and handsome, of all the best varieties.

DAWAR TREES, for Gardens. The largest stock in the country, and the most complete.

DAWAR PEAR TREES. Our collection consists of well known leading varieties, and numbers more than 150,000 saleable trees.—The superiority of these, being grown in the country, over imported trees is well known to every intelligent cultivator. Nothing, in fact, in this country, can equal our collection of Pear Trees.—They can be had from one to four years growth, some of which are now covered with fruit.

DAWAR APPLE TREES. We cultivate in large quantities the best and handsomest varieties of apples on Doucain and Paradise stocks for Dwarfs and Pyramids, and can furnish them in large quantities, from one to two years growth.

DAWAR CHERRY TREES. All the leading varieties are cultivated on Mahaleb stocks, extensively. We can furnish by the hundred and thousand, from one to two years growth.

CHERRY Currant, the largest variety known. Upwards of 1,000 plants on hand.

ENGLISH GOOSEBERRIES, all the best sorts.

LARGE FRUITED MONTHLY RASPBERRY, that gives a crop of fine fruit in the autumn.

STRAWBERRIES, all the best sorts.

ORNAMENTAL SHADE TREES, of good size, for streets, parks, &c., large and well grown.

CHOICE TREES AND SHRUBS, for lawns and pleasure grounds, including all the finest, new and rare articles recently introduced.

HARDY EVERGREEN TREES. Norway Spruce and Balsam Fir, of small size, in large quantities; and a moderate supply of large ones, besides nearly fifty new and rare Evergreens, including Deodar Cedar, Cedar of Lebanon, Chile Pine, Cryptomeria or Japan Cedar, Himalayan Spruce, &c., &c.

ROSES, PEONIES, a large and complete collection, including the finest varieties.

PULLOWS. A collection of upwards of sixty varieties, including thirty new varieties imported last spring.

DAHLIAS. Upwards of 100 select varieties, including the finest English prize flowers of 1849 and 1850.

The following Catalogues, giving full information as regards terms, prices, &c., will be sent gratis to all who apply by post paid letters or at the office.

1st, a General Descriptive Catalogue.

2d, a Wholesale Catalogue.

3d, a Catalogue of Select Green House Plants.

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ELLWANGER & BARRY,
Mount Hope and Garden & Nurseries,
Rochester, N. Y.

THE MODEL ARCHITECT,
A series of original designs for Cottages, Villas, Suburban Residences, Country Churches, School-Houses, &c., &c., by Samuel Sloan, A.R.A.

The above work is designed to meet the wishes not only of those directly interested in building, but of all those who desire the advancement of this noble art in our country, and wish to cultivate their taste and acquaintance with architecture. The handsome manner in which it is prepared and embellished, renders it a tasteful ornament for the drawing room, while its accurate delineations give it the highest practical value.

The projector will find in it every variety of style and design, accompanied, as mentioned below, by all minutiæ necessary to construction. By its aid may build without danger of making those numerous and expensive mistakes which so often occur.

The operative artisan of every grade will find the work of inestimable value. It is a complete book of reference, and all plates are drawn to a scale with the utmost accuracy, so that he has only to study them with his rule and compass.

The work, in two volumes of twelve numbers each, to be issued monthly, until complete. Each number contains four Lithograph Engravings of original designs, varying in cost of erection from \$800 to \$14,000. There are also four sheets of details accompanying the designs, comprising ground plans, &c., &c. Besides this, each number contains eight pages of letter-press, descriptive of the designs, giving extended accounts of the various styles adopted, essays on warming, ventilation, &c., &c., elaborate specifications, estimates, tables, and in short every thing desirable, either for construction or for general information, in beautiful type; the whole being executed on the very finest paper, manufactured expressly for the work. PRICE 50 CENTS A NUMBER.

Address, post-paid, E. S. JONES & Co., Publishers,

S. W. cor. 4th and Race sts., Phila., Pa.

Persons forwarding a list of five subscribers accompanied with the cash, shall receive a sixth copy gratis.

Sept. 1851.

FINE STRAWBERRY PLANTS.

Strawberry Plants of several varieties and fine quality can be had by the hundred or thousand at the low price of \$1 per hundred, by addressing with amount enclosed,

JAMES O'CONNOR,
Safe Harbor, Lancaster co., Pa.

All orders will receive prompt attention.

(Sept. 1851.)

ANALYTICAL LABORATORY,

Yale College, New Haven, Connecticut.

JOHN P. NORTON, PROFESSOR OF SCIENTIFIC AGRICULTURE.

This Laboratory is now fully organised for instruction in all branches of analyses connected with the examination of soils, manures, minerals, ashes, animal and vegetable substances, &c.—Full courses are given in each of these departments, and also in general Chemistry, both organic and inorganic.

Students can thus fit themselves to become instructors in the various branches of Chemistry, or to apply so much of that and kindred sciences as may be necessary to the practical pursuit of agriculture or manufacturing. The demand for teachers and professors in the various branches of chemistry, especially agricultural, is now great and increasing, so that this is a fair field for those who have a taste for such pursuits.

A course of Lectures on Scientific Agriculture, by Professor Norton, commences in January of each year, and continues for two and a half months. This course is designed especially for the practical farmer, and has given great satisfaction to those who have attended it in previous years. It embraces a plain connected outline of the leading points in improved agriculture, treating in succession of the composition of the soil, the plant and the animal; of their connections with each other, and of all the improvements in cultivation, manuring, feeding, and fattening, which have been adopted in the best agricultural regions. This course is made so plain and practical, that the farmer who attends it can understand the whole, and apply it in his own experience.

More can be learned by attendance upon such lectures, by reading in connection with them, and by associating with others who are also desirous of obtaining a better knowledge of their profession than in years away from such advantages. The young farmer learns to think for himself, to see that a practice is not necessarily right because it is old, to understand the reasons for all that he does, and with this increase of knowledge is better able to make farming profitable as well as interesting.

Board and lodging may be procured at from \$2 to \$3 per week, and the Ticket for the Lectures is \$10.

In connection with the Lectures is a short Laboratory course, by means of which those who desire it, are taught to test soils, manures, manures, &c., in a simple way, and to make many elementary examinations of a highly useful character. The charge for this course is \$25.

To those students who go through the full Laboratory course, the charge is about \$200 per annum, and they can be admitted at any period of the year at a proportional charge.

For further information apply to Prof. JOHN P. NORTON, New-Haven, Conn.

(Sept. 4th)

LIGHTNING ROD.

THOS. ARMITAGE'S PATENT MAGNETIC LIGHTNING ROD.—The patentee takes pleasure in informing his friends and the public in general, that after many years' close investigation and numerous experiments, he has finally arrived at the true principle of manufacturing and putting up Lightning Rods and Points, and is now ready to serve his friends and the public in general, at the shortest notice, at his manufactory, VINE street, above 12th, Philadelphia, south side, where all persons are respectfully invited to call and examine for themselves, this being the only place where they can be purchased. This rod has been examined by the most scientific gentlemen now living, who have pronounced it to be the only safe rod that has been put up or seen.

N. B.—Patent Rights are now offered for States, counties or districts in the United States, Philadelphia and Chester counties excepted.

Agencies can be formed by calling at the Factory, Vine street, above Twelfth, south side, Philadelphia

Sept. 1851.

THOMAS ARMITAGE.

COTTAGE FURNITURE.

WARWICK & Co., are constantly manufacturing new and appropriate designs of enamelled, painted and Cottage Furniture, of warranted materials and workmanship. Sets of Chamber Furniture consisting of DRESSING BUREAU, BEDSTEAD, WASH-STAND, TOILET TABLE, and FOUR CANE SEAT CHAIRS, as low as \$30 per suit, and upward to \$100, gotten up in the most superb style.

Those who are about furnishing hotels, cottages, or city, residences, should call and see this style of furniture, which for cheapness, durability and elegance is far preferable to the old heavy kinds of mahogany, &c.

Orders from all parts of the country promptly attended to and carefully packed.

WARWICK & CO.,

Warerooms, No. 4 and 6, South Seventh st., between Chestnut & Market streets, Philadelphia.

Sept. 6th

HENRY A. DREER'S SEED AND HORTICULTURAL WAREHOUSE,

No. 59, Chestnut st., near 3d, Philadelphia.

Constantly on hand a large and well selected assortment of Garden, Field, Grass and Garden Seeds, Fruit Trees, Grape Vines, Roses, &c.

Horticultural Implements in great variety.

Catalogues forwarded on post paid application.

(Sept. 4th)

PROSPECTUS OF THE NORTH AMERICAN SYLVA.

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PENNSYLVANIA FARM JOURNAL

VOL. 1.

LANCASTER, PA., MARCH, 1852.

NO. 12.

THE FARM JOURNAL.

S. S. HALDEMAN, Editor.

For the Farm Journal.

Application of Poudrette to Corn Fields--Surface
Manuring.

MR. EDITOR:—Believing that your Journal is destined to be the means through which the farmers of Pennsylvania will eventually communicate *all such facts and experiments* as may be useful to each other, and feeling much indebted to those who have been heretofore contributors to other agricultural publications, I, as a citizen of our good old commonwealth, intend to make *her* Farmer's Periodical, the medium of communicating my experience to the public. And if you can succeed in inducing farmers to give, in their own plain and intelligent manner, their success (and failures also) in the cultivation of crops, with minute descriptions of quantities, expense, &c., its usefulness would be greatly enhanced.

To add example to precept, I propose occasionally to report to you my operations at "Cream Hill," and shall at present confine myself to the subject of "Surface Manuring," or rather to give a detailed statement of my success in the application of poudrette to a crop of corn.

Some six years since, in making an exchange of land with a neighbor (to straighten our lines) I came into possession of about four acres of cold, moist, poor clay land. It was covered with oxeye daisy and carrot roots, with, in the lower parts, an occasional patch of alder bushes. After I had planted my ordinary crop of corn in the beginning of May, I made several French drains through this piece of land, thereby effectually drawing off all the water which had heretofore risen to the surface. The drains are from two and a half to three feet deep with about fifteen inches of small field stone in the bottom, covered first with shavings from the carpenter shop, which I deem best for the purpose, and filled up with earth. After preparing the land well, I procured from the

manufactory, thirty bushels of poudrette, at thirty cents per bushel, and commenced planting by putting first, about a gill, perhaps a little more, of the manure in a hill, and dropping the corn thereon, covering from two to three inches deep. After planting four rows in this manner, I put in four others without manure, then again four with, and four without. The remainder of the lot was planted, with poudrette used as above described, except the last twelve rows, which, from want of time, it being late in the evening, and having the appearance of rain, I was compelled to plant without manure. I should have said this was on the first day of June. On the next day, I put on the surface of the hills in the last named twelve rows, the same quantity of manure as on the other parts of the lot.

The season was a fair one for the corn crop. The following was the result. On the four first rows manured (outside) I had twenty baskets full, of well matured corn. On the first four without manure, fourteen baskets of very inferior corn, much of it unripe; on the third four rows manured, nineteen baskets; on the next four without manure, fourteen baskets of like quality as before; and on the next four rows manured, nineteen baskets of good corn. I neglected to measure any more of it, although I have since regretted that I did not measure the four rows where the manure was placed on the surface at the same time, as I believe, from its size and appearance that it was little, if any better, than that where there was no manure.

After I had plowed the land and before planting, I put on fifty bushels of lime per acre, which had been burned the year before, and contained about thirty per cent. of magnesia.

The next season the lot was sown with oats, and during its growth I could distinguish at the distance of a quarter of a mile, where *every* corn hill in it had been manured. The effect, however, was not as manifest where it was manured on the surface, as where the poudrette was buried with the corn.

I have since that time used poudrette, guano and

bone-dust with various results. So far, however, always failing to derive any benefit from guano, and yet so satisfied with the advantages which some of my neighbors have derived from its application, that I have again bought a ton of the "best Peruvian" with which I propose to renovate an old field of six acres, of stale land, which has been thrown out for fifty years. I shall plow it in, in connexion with a like quantity of Plaster of Paris, leaving as I always do, a few rows without any manure to test its value.

If the above should prove acceptable to you and your readers, I may, at a future period, give you the result of an experiment with barnyard manure, pouddrette and guano, upon a field of wheat, grown subsequently to the foregoing detailed experiment with corn.

Respectfully,

H. JONES BROOKE.

Radnor, Del. co.

For the Farm Journal.

Dissolved Bones.

MR. EDITOR:—Wishing to cultivate a field of five acres, that had been farmed for some ten or twelve years without any application of lime or other renovator, until it had become very poor, I determined in the fall of 1850 to put it in Wheat. It had been in corn and yielded a very meagre crop, then in oats, and after the oats in clover, that made a very scanty covering; the stocks keeping a respectable distance from one another, and even the clover was pastured off, so that the promise for a wheat crop was a poor one. After giving it a dressing of lime at the rate of 30 bushels to the acre, on the sod, it was plowed in August to the depth of six inches, the soil not permitting deep plowing. Then, when the ground was in its rough state, I applied the following preparation, viz: 13 bus. bones, dissolved by 300 lbs. of sulphuric acid—The bones were very coarsely ground, and required more acid and time to dissolve them than if they had been finer. When sufficiently dissolved, I had them mixed with a cart load of saw dust, and after leaving it for a few days in a pile to heat, mixed with it 500 lbs. of Guano, sowed it broadcast on the field, at the rate of 2½ bushels of bones and 100 lbs. of guano to the acre.

The wheat grew finely in the fall, looked well through the summer, and when harvested, yielded a small fraction over 29 bushels to the acre; fully 15 bus. more to the acre than the land would have produced without the bone, sawdust and guano. It was seeded in clover and timothy, which grew so rank in the low and mere wet part of the field, as in a measure to injure the wheat; making a thick mat all over the ground, and promising a fine yield the coming season, which will abundantly compensate for all the outlay incurred, without the additional amount of wheat.

I also applied the dissolved bones, but without guano, on part of a field of corn. The result was equal to that of the wheat. The part of the field to which it

had been applied, grew off from the first, stronger and greener; so that many persons that examined the field were able to point out the very row where the bones had been applied. There was evidently from 10 to 20 bushels mere to the acre on that part of the field.

As ground bones are difficult to be obtained in sufficient quantity to be largely applied in their ground state, I believe it is much more economical and profitable to dissolve them in acid. The after crop of clover which it most benefits, will much more than pay all the expense of the acid. S. D.

Oxford, Feb. 10, 1852.

[The above communication from one of the best farmers in Chester county, will, we are sure, be read with interest, and should be, with profit, by every subscriber of the Journal, who is desirous of improving the quality of his soil. The use of bones as a fertilizer, although extensively practised in England, and in portions of the United States, is not common in Pennsylvania. It is a well known fact that ship load after ship load of bones has been sent from the port of Philadelphia to England, by English agents located there expressly for that purpose. Many of these bones are collected in the interior of our State, and sent by canal and otherwise to Philadelphia. A gentleman residing near that city informs us, that a few years since, desirous of procuring several tons of bones, he found the bone market so completely monopolized by English agents, that he eventually succeeded in getting the quantity he wished, only because the vessel designed to carry them to England, was unable to take them. Facts of such a character are worthy the most serious consideration of our farmers. If English farmers can afford to keep their agents in the United States to collect, pay the freight across the Atlantic, and yet find bones amongst the best and cheapest of their fertilizers, why should they not be equally valuable to the Pennsylvania farmer, who has them at his very door? If other of our readers have experimented with bones, we respectfully request that they will enable us to lay before our subscribers the results of their experiments.—[En.

For the Farm Journal.

Agricultural Nuisances, No. 7.

Horse Nettle. Carolina Nightshade. Adam's Apple. *Solanum Carolinense. Linnaeus.*

It belongs to the 5th Class and 2d Order in the Artificial System of Linnaeus, and to Order Solanacea in the Natural System. The meaning of *Solanum* is uncertain. There are about 500 species of the genera described, about ten of which are natives of North America. The Potato and Egg plants are species of this genus. The plant under consideration is a native of the Southern States. It grows to the height of 1 or 2 feet, has a shrubby appearance, but is annual, the stem is hollow, branched, and armed with sharp spreading prickles, the leaves are 4 or 5 inches long, and 3 or 4 inches wide, egg shaped but are va-

riously scalloped, prickly on both sides; the foot-stalks, both of the leaves and flowers, half an inch to one and a half inches long; the stem of the flowers grows opposite to the leaves, often 5 or 6 inches long. The flowers are bluish white; the fruit is orange yellow in little balls about one third of an inch in diameter.

This vile weed, not much remote from the Canada thistle, is found growing in many parts of the State in cultivation under the name of "*Adam's Apple*." When it gets fairly introduced it is almost impossible to get rid of it, it is so tenacious of life. In some parts of the Southern States it is very abundant. It grows in patches, and its numerous spines deter stock from feeding among it. It was introduced into Marshall's garden in Chester county, and has now become a pernicious weed in that vicinity.

I can discover some beauty in every plant, but this is one that has but few characters to recommend it, and will hardly warrant the risk of seriously injuring the whole agricultural district for all the beauty it affords, and should be promptly eradicated wherever it is found.

J. M. M'MINN.

Unionville, Jan. 9th, 1852

For the Farm Journal.

The influence of the Moon.

MR. EDITOR:—I do not quite like the tone of the article with the above caption, in your January No. It appeared to me both uncandid and ungenerous. I would humbly suggest to your correspondent, that dogmatism is not argument, or ridicule, reason.

This generation is emphatically "wise in its own conceit." Whatever it does not understand, it rejects as foolishness. Even Science, in the pride of her newly fledged pinions, soars aloft, and imagines that her vision takes in all, that God has made visible; and because she does not discern objects or colors, of which her teachers have spoken, declares positively that they never existed except in the brains of superannuated dreamers. Young people are always ridiculing "old women's whims,"—but what do we learn from the fact, that as fast as they arrive at the age of matured experience, they invariably adopt those same "ridiculous whims?" only, that age has given them wisdom, also. Thus we have a class of philosophiers who, in warring against Superstition, sometimes attack the invincible array of Truth.—Thus, because illiterate superstition imputes too much to the lunar influence, they deny that the moon has any influence whatever.

But we must proceed with your correspondent's declaration as we would with a stocking which we designed to unravel; we must commence at the toe.

If the Creator of all the "systems of vast and infinite worlds"—deigns Himself to control the destinies of earth, and her feeble children, is it unreasonable to suppose that He has so endowed and arranged

the "vast and infinite worlds" that they shall mutually influence and benefit each other? If, as Astronomy teaches, the moon is a naked ball, without oceans, or rivers, or even a surrounding atmosphere, and therefore, is unfitted for the habitation of animal life, or the growth of any organic production; for what purpose was she created? To light the earth? Certainly not, for Wisdom would in that case have so disposed her, that the illuminated hemisphere should always have been toward the earth. I am rather skeptical, however, as to the uninhabitableness of the moon. I cannot believe that the God who has so bountifully diffused "the living creature" through our earth would have created so vast a waste. Yet if it be so, then the moon accompanies the earth, for the especial benefit of herself and her children; and since it is not merely to give light, she must be appointed for other purposes. Your correspondent admits her agency in producing the tides, overlooking however the "spring tides" and "neap tides," consequent upon her "changes."

It is hardly probable that any ignoramus imagines that the moon "jumps" from one place to another, or that she changes her form or her substance. We have always ignorantly supposed that these changes had reference to the differences of her position with regard to the sun in the quadrature of her orbit.—Certainly the earth receives from her, more reflected sunlight when her whole bright side is toward us, than when she turns from us the half of her effulgence, giving the remainder obliquely; or when she turns her back altogether. This difference is demonstrated by the difference in the tides; I mean that the position of the moon with respect to the earth, and the sun does cause this difference. If, then, the moon does so attract or influence the waters of the ocean, is it irrational to suppose, that her influence acts upon all aqueous particles, either on the earth or in her surrounding atmosphere? Does not the fact that the moon is specially appointed to wait upon the earth in her revolutions, suggest the belief, that she has some special office with reference to our earth? This office is not merely to give light as we have shown; and besides, it seems to me evident, that the Creator intended that we should sleep at night, which we can do very well without moonlight. It is, therefore, my humble opinion that the light which the moon reflects upon us, is an influence intended for more important purposes, than to light beasts to their prey, or robbers and assassins to their desperate work.

If the water is influenced by the Moon, since our atmosphere is essentially an aqueous body, it must be subject to this influence. No person will deny that all vegetation is sustained by the water and gases of the atmosphere. Every observant gardener knows, that some vegetables do grow faster when the Moon is near the full, than when she gives little or no reflected light, because the atmosphere, when satura-

ted by this Lunar influence, possesses in larger proportions, the properties on which they subsist.—Animal life is hardly less dependent upon atmospheric stimulus than are vegetable productions; consequently whatever influences the atmosphere, affects animated as well as vegetable nature. I have known three of that unfortunate class of 'insane persons, known as lunatic. In each of the three—the insane despondency, regularly at every full moon, became raging madness. I have also known monomaniacs, whose hallucinations, obviously "waxed and waned with the moon." Some corporal chronic diseases also present the same phenomena. I therefore, at the risk of being classed with the unfortunates referred to above, assert my earnest faith in the venerable doctrine of Lunar influence, not as exerted upon "meat tubs, erout barrels and cream pots," but upon every living thing which breathes atmospheric moonshine either by means of lungs, or green leaves.

My belief is not a theory; but a conviction founded upon long observation and repeated experiment. I am certain of it. It is a generally received fact, and obvious to all observers, that the full Moon does powerfully dispel the clouds or watery vapours. Even Milton sang,

"And from before the brightness of her face,
White break the clouds away."

Moon gazing is exceedingly injurious to the eyes, or rather to the nerves, on which depend the power of vision. May not the other nerves, and through them the brain, suffer from the same injudicious practice? Did you ever know an habitual Moon gazer, who did not betray spots of moonshine in his intellect?—

I would quietly remind your Correspondent that

"There are more things in Heaven and earth,
Than are dreamt of in your philosophy."

I shall next expect to read some wise man's assertion that the mineral known as loadstone, does not attract iron; and that there exists no influence of attraction, for the needle, to the pole.

There are few great truths that are not more or less clouded by superstitions, the murky exhalations of the human mind. But we should not attempt to overthrow, or extinguish the Truth, in order to dispel the superstition—inasmuch as superstition is always better than infidelity. Although the Almighty Creator has given to Nature "imperative and inevitable laws," it does daily appear that the acting and counteracting of these laws, one upon the other does produce multifarious, and contradictory effects, upon ephemeral objects—and as far as my observation extends, winds and clouds, and consequently weather, are subject to no special regulation or restriction, still that they are influenced by the Sun and by the Moon, no candid student of Nature will deny.

LYDIA JANE PIERSON.

Liberty, Jan. 17th, 1852.

Translated for Farm Journal.
Agricultural Chemistry, No. 7.

But the farmer must not content himself with permitting the plants he cultivates to appropriate to themselves the alimentary matters merely with which nature has supplied the soil. His efforts must be constantly directed to provide seasonably, additional supplies, not only to replace those of which the growing crops have deprived the soil, but steadily to increase the fertility of his land. This brings us to the subject of *manures*—with which it is primarily important that the farmer should acquaint himself and be able to avail himself of the processes which nature herself adopts and pursues for enriching the soil. Thus, in order to furnish the needed supplies of gaseous nutriment, the farmer should provide substances readily convertible into carbonic acid and ammonia; as he must likewise supply the requisite substances for the production of the more solid and incombustible matters. Now, in order to secure a constant supply of the incombustible elements, we find in nature a continual reciprocal action and reaction of substances on and among themselves, resulting in their gradual disintegration and solution.—These processes are facilitated and improved by fallowing, and by repeatedly stirring the soil. But as nature is constantly varying the kind of plants she produces on the same soil, so that all the various nutritive matters contained in it may successively be consumed, she thus plainly intimates to the farmer the utility of making similar changes with the plants he cultivates, or, in other words, to introduce a systematic *rotation of crops*.

In manuring land we should have constant reference to the following principles, which have been well established by experience.

1. Plants in general require nearly all those simple substances which we have enumerated and described in the former part of this treatise.

2. They derive their elementary substances in part from the air, and in part from the soil.

3. Though all plants contain nearly all the substances enumerated, still particular plants require a greater proportion of one of these substances than of another, and on the presence of this greater quantity in an available state, depends the full and thrifty development of the plant.

In this view, systematic manuring might be conveniently arranged under three sub-divisions: 1, manuring for the general improvement of the soil: 2, manuring to remedy some particular defect of the soil: 3, manuring to supply merely the special wants of particular plants or crops.

Manuring for general improvement is resorted to for the renovation of exhausted land, so as to re-establish its fertility and productiveness. For this purpose, stable or barnyard manure is unquestionably cheaper, more generally available, and superior to any other. There are various kinds and qualities of

stable manure. As regards the gases generated by and evolved from them, they may be divided into two principal classes—the one producing more carbonic acid than ammonia; and the other, at least in its earlier stages, producing more ammonia than carbonic acid. To the first class belong the manures produced by horned cattle; to the second, that produced by horses. The custom of applying the two kinds of manure in combination, or of using that of cattle in preference on light and warm soils, and of appropriating that of horses to colder or clayey lands, is based on the fact that the latter evolves ammonia in large quantity, which in the absence of absorbents, in which light soils are deficient, acts injuriously on vegetation; whereas such injury is not caused by it when used on clayey land. For the same reason, experienced practical farmers in general avoid applying fresh manure to light soils, because, in such manures the formation and evolution of ammonia proceeds with great and not unfrequently destructive rapidity, owing to the absence of suitable absorbent substances. In other respects also, fresh or recent manure produces comparatively less effect than follows the application of an equal quantity of well decomposed dung, for the vegetable remains which it contains, and from which humus is to be formed, are yet only partially in a decomposed state and not reduced into a homogeneous mass, and its incombustible elements are likewise too greatly diffused, so that proportionally a smaller amount is supplied to the soil. But where it is designed to effect a mere mechanical loosening of the soil, it is useful to apply fresh manure, which should for this purpose be ploughed in as thickly as possible. When the increased formation of carbonic acid is promoted by the use of fresh manure, the solution of the silicates in the soil is at the same time hastened, and the incombustible elements, in which such manure is deficient, will thus be supplied, if the manure be applied in large quantity. On the whole, fresh manure acts with greater efficacy in wet seasons or wet soils than such as is well rotted; because decomposition does not then proceed with such rapidity as to cause an injurious evolution of ammonia, and the straw and coarser substances mixed with it, which longer resist decomposition, prevent the soil from becoming compacted by heavy rains.

The principal action of stable manure, as a fertilizer, is based on the following facts. Domestic animals are fed with grain and grasses or hay. By means of this food they receive all the various elementary substances which the plants have withdrawn from the soil during their growth. The animals themselves require for their sustenance a proportionally small part only of these substances, the remainder passing off mainly in the form of excrement.—The manure they produce must therefore contain and return to the soil, in the proper proportions, the ele-

mentary substances required by plants or cultivated crops, and contain them in such state of solution, sub-division and combination, as is best adapted to promote vegetable growth.

As regards the quantity of barnyard manure to be applied, as much as possible should be allotted to the land to be cultivated, yet not so much as to cause the cereals to *lodge* and thus prevent the formation of perfect grain. Still it is always better to manure too bountifully than too sparingly, because the effect of excessive manuring may be remedied by thin seeding, drill culture, and by frequently stirring the soil while the plants are growing, if the crop cultivated admit of it. Moreover, plentiful manuring is allowable and justifiable where neither straw, hay, nor grain is sold from the premises; because the quantity of manure produced on such a farm is constantly increasing, since plants, by means of the elementary matters which they derive from the soil and the air, and by the continual decomposition of the mineral substances of the soil, are enabled to, and actually do, supply more than they receive from the manure, even after allowing for what is carried away in the form of beef, pork, butter, milk, &c. And it is this excess which goes to enrich and increase the fertility or productiveness of the soil.

For *litter*, straw is undoubtedly the best material that can be used, because other substances change and deteriorate the nature and composition of the manure produced, as well by the different proportions and mixture of their ingredients, as also by their inferior efficacy in promoting the loosening of the soil and the decomposition of its mineral ingredients.—Other materials can be used advantageously for litter only, when they can be properly mixed with straw.

As to the *treatment* and *preservation* of manure, it should be constantly borne in mind that it consists of substances, some of which are volatile and others incombustible. The former naturally escape almost as rapidly as they are evolved, and escape the more easily, the more the mass becomes heated in the process of fermentation. But the escape of these volatile substances is very injurious, and the farmer's efforts should be assiduously directed to prevent such escape and injury, as much as possible. As moisture absorbs both carbonic acid and ammonia, these two substances may be retained by keeping the manure heap constantly in a moist state, so as to moderate the heat of fermentation and fix at least in part, the volatile matters evolved. Or the manure heap may occasionally be strewed over with fresh dug earth which will absorb the ammonia, whilst the carbonic acid will render soluble again the silicates present.—If, in addition to strewing earth over the manure heap, it be occasionally sprinkled over with dilute sulphuric acid, the volatile ammonia evolved will be retained and converted into sulphate of ammonia—a salt which is not volatile, but which is readily solu-

ble in water and is a powerful fertilizer. If gypsum be strewed over the manure it will undergo decomposition. Its sulphuric acid will unite with the ammonia and form sulphate of ammonia, and the lime will take up the carbonic acid; thus the escape of their volatile substances will be prevented.

As regards the *depth* to which manure should be introduced in the soil, much depends on the object which it is intended to accomplish. In this view we must distinguish between manures which are designed to operate rather by the volatile and soluble substances they contain, and such as consist chiefly of incombustible though soluble substances. If the former—usually recent animal manures—are to be applied, they should be covered deep, because the gases which will be evolved therefrom, naturally ascend and must find above the manure, the soil on which they are to act, and in sufficient quantity or depth to be perfectly absorbed. The more rotted or decomposed manure is when applied, the less attention do its volatile matters deserve, but the more careful should we be to preserve the valuable and highly soluble salts it contains. These substances are washed or leached down into the subsoil by rains, and are thus placed beyond the reach of many plants. The greater the amount, therefore, of soluble salts, which such manures contain, the more shallow should they be plowed in.

The *crops* also, for which we manure, must be taken into consideration. For tap-rooted plants the manure should be placed deeper in the soil than for those whose roots do not penetrate deep. As manure which is plowed in shallow acts more quickly than that which is covered deep, because the atmospheric air has more ready access to it, the farmer has it in his power in a great degree, to regulate the consumption of the manure in accordance with the wants of the plants he cultivates. It is also to be observed that land which has been manured, may, in the ensuing years be plowed deeper than before, because much of the more thoroughly decomposed portions of the manure sink deep in the soil. In the last place, we may remark also that a principal effect of barnyard manure, is, that by its decomposition it serves to condense and store up in the atmospheric air immediately surrounding or in contact with it, large quantities of carbouic acid and nitrogen; thus providing the crop with an abundant supply of those substances, which plants by means of their leaves, are destined to absorb as nutriment.

For the Farm Journal.

Mules for general farming purposes.

MR. EDITOR:—There is one subject which should claim the special attention of our farmers in Pennsylvania; but which, for some unaccountable reason, has been strangely neglected. I refer to the introduction into more general use, of that valuable animal, the mule, for farm purposes.

For some years I have been a practical farmer, and like most farmers in their novitiate, I purchased such horses as to me, appeared best adapted to my purposes. Little attention was paid to the quantity of grain necessary to keep them in decent condition from year to year. After using horses four or five years, I came to the conclusion that my farm work could be done as well and as quickly, and that nearly one-half of my horse feed might be saved; and I hoped to accomplish all this by substituting mules for my horses.

For a year or two previous to the introduction of the mules on my farm, I urged upon my neighbors the expediency of using them. I did this on the ground of their superior activity, strength, hardness, cheapness of keeping, longevity, &c. But my neighbors, like the generality of farmers, had adopted the prevailing opinion that they were hard to manage, vicious and unruly. This slander upon the mule seems to have had its origin in the fact that iron masters, canal boatmen and others, who employ mules largely, entrust them to merciless hirelings, who inhumanly abuse the poor animals, by beating, whipping, &c., until fright, &c., producing something like a feeling of self-defence, drives them to desperation, and viciousness ensues. If gentle means were used, and the mule treated as every useful creature should be, with a proper degree of humanity, they would become as quiet and tractable as the horse.

To those who would desire to purchase mules, I say, select and purchase them before they are broken to harness, at the age of three years. Place them, one at a time, in harness beside a gentle horse, and work for a day or two. Let the most soothing means be used. If the mule becomes refractory, instead of beating him into submission, try the power of kindness, and my word for it, in a very short time he will work well wherever you choose to place him.

For the purpose of illustration I will give you my own experience in the matter. I have now in my possession, a pair of dun mules, three years old, that ten months ago never had bridle or harness on.—These mules are as perfectly broke to single or double harness, as any of the horses that I have worked for years. This was accomplished by gentle treatment, and I am satisfied that the same course, if generally pursued, would soon redeem the character of the mule from the unjust censure so freely heaped upon him by those who have always treated him harshly.

The mules above referred to, were awarded a special premium at the late State Fair. They are not only gentle and kind, but I can do more plowing with them in the same space of time, than with any two horses I ever had; with this advantage in favor of the mules, that they keep sleek and fat on one-half the feed required for the horses.

Another argument in favor of mules is, the com-

parative ease with which they can be reared. With such a soil and climate as Pennsylvania, the cost of raising a mule need not exceed that of a three year old steer. The mule at that age, even though an ordinary one, will command one hundred dollars, and if a first rate one, from one hundred and twenty to fifty dollars; while nine-tenths of our horses at three years old, are not worth more than eighty dollars, although the cost of feeding and attention is nearly twice as great.

SAMUEL MUMMA.

Locust Grove Farm, Dauphin co.

For the Farm Journal.

Large Seed Potatoes vs. Small.

MR. EDITOR:—The question of large versus small potatoes for seed, seems at present to engage a large share of attention in several of our agricultural journals. Perhaps a statement of an experiment on a larger scale than usual will be of interest at this time. In the fall of 1848 I measured off two acres of ground and had it deeply plowed. The soil is a warm sandy loam, with a deep sandy subsoil, and was at the time of plowing, down to timothy meadow, three years from the sowing. It was plowed in the fall for the purpose of exterminating the cut worm, which abounded. The following April we hauled upon it one hundred two horse wagon loads of well rotted barnyard manure, spread it evenly and plowed nine inches deep, harrowed well, marked out drills four inches deep and three feet apart, and planted with fine large Neshannock potatoes, chosen and preserved carefully for the purpose. The potatoes were *cut* and planted at the rate of twenty bushels to the acre. The large seed was insufficient to complete the planting and we were forced to have recourse to the culls, about the size of walnuts. The whole patch was planted in one day. The plants came up well, and were well worked with the cultivator. No apparent difference between the large and small seed. They were dug about the middle of September, commencing at the rows planted with the small seed, (about a quarter of an acre). We were surprised to find the potatoes so large and the yield so good, it having been a favorite theory of mine that the largest potatoes alone should be planted, to make a good return. We measured carefully several rows, and made large calculations on the probable yield of the large seed. Judge then of our surprise, when measuring several rows of the latter, to find that they fell a little short of the former, both in quantity and quality.

Another acre and a half which we planted a few days later than the first patch, on deep alluvial soil, in a very careless manner and entirely with the smallest potatoes, produced as fine a lot of large potatoes as I have ever seen. The yield of the two acres was 400 bushels, and of the one and a half acres 200.

In 1850 I lost all of my seed potatoes by storing too large a quantity together; and seed being very

scarce in this neighborhood, I was forced to plant such as could be purchased, red potatoes, large and small mixed. I planted on newly cleared land at the rate of nine bushels to the acre, and had a much better crop than could have been expected from the quantity of seed, viz: 800 bushels from three acres. We sorted out all the small ones, about the size of walnuts and hen eggs, for seed, and in April, 1851, planted $7\frac{1}{4}$ acres of rich new land in rows three feet apart, and at the rate of nineteen bushels to the acre. potatoes whole, or when an unusually large one occurred, cut in two. When dug, they were assorted on the ground, the large ones sent to market and the small ones stored for seed. I measured carefully the product of one acre, and found 320 bushels, of which one fourth were culls and the other three fourths the best quality of merchantable potatoes; and as such they commanded a high price in market. I will also mention, that my potatoes have never been infected with the rot, except in one or two spots where the water of a spring occasionally flowed over the ground after heavy rains, although my neighbors for several years past, until the present season, have lost nearly their entire crops. I do not pretend to assign any reason for my exemption from the scourge, except perhaps, early planting. Yours respectfully,

PATRICK A. WAY.

Sewickley Valley, Jan. 12, 1852.

Webb's Patent Straw Cutter.

Our attention has been called to this Straw Cutter by S. Hayden, of Bradford county, who is now introducing it into this State. He has sold most of the South Eastern counties to Paschall Morris, of West Chester, Chester county, of whom Machines may be obtained.

The improvement consists in adapting two straight knives to a horizontal shaft, so as to strike obliquely against a circular plate of iron, giving the knife the position to cut with greatest ease, with the least force, and with the most expedition of any Machine we have seen.

The knives are attached to the shaft by movable arms, capable of being set at any angle you choose. may be sharpened without removal, and used for a great number of years without renewal. In short, the Machine is simple in its construction, and efficient in its execution. It was invented by Joseph W. Webb, of Cayuga county, New York, and patented by him October 8th, 1850.

MR. EDITOR:—I notice in one of our Journals an enquiry, What will prevent Bugs from eating cucumbers, etc.? I will tell you what I do with very good success—I put a box around the hill just large enough to enclose the plants about eight inches deep—place it before the plants emerge from the ground. This process has been very successful with me and such of my neighbors as have tried it. Yours, &c.,

Brookfield, N. Y.

A. L. SANDERS.

Our Poultry Yard.

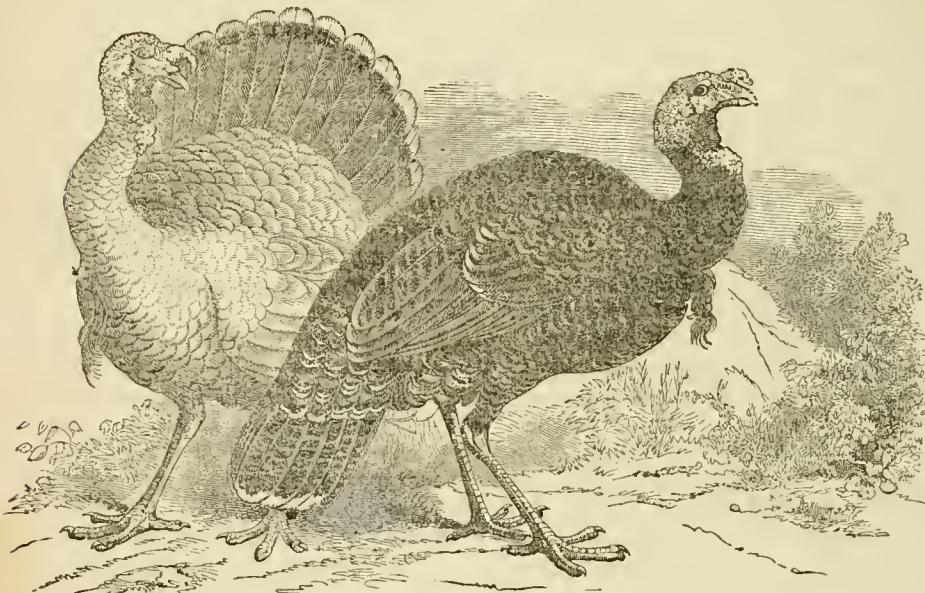
THE TURKEY.

This is one of those Fowls, that, as yet, are found in the wild, as well as in the domestic state. How long this may be, is hard to say; probably, not long; for as civilization and improvements advance in North America, the country to which they belong, they will doubtless share the fate of the Dodo and Bustard, and be known only in history, or by the specimens to be seen in the barn-yard.

Among the living tributaries to the luxury of Man, the Turkey is an example of the results yet to be expected from the exploring spirit of our day. It is the most recent, and, except the Hen and the Goose, the most valuable of our domesticated birds. We may, indeed, call it quite a new introduction; for what, after all, is a period of three hundred years

compared with the time during which Man has had dominion over the earth and its brute inhabitants? The obscurity which hangs over the transmission of the Turkey from America, and which there is little chance of clearing away, except by industrious ferreting amongst old family records and memorandum books, shows that those who brought it to the Old World had no idea of the value of what they were importing; but probably regarded it like any other remarkable production of nature—a Macaw or a Tortoise. The young would be distributed among friends with the same feeling that Golden Pheasants and such like are with us; these again would thrive and increase, and the nation would suddenly find itself in the possession of a race, not of pleasing pets; but of a valuable prolific, and hardy stock of Poultry.

When the Hen has once selected a spot for her nest, she will continue to lay there till the time of her incubation, so that the Eggs may be brought home



DOMESTIC TURKEYS.

from day to day, there being no need of a nest Egg, as with the common Fowl. She will lay from fifteen to twenty Eggs, more or less. If there are any dead leaves or dry grass at hand, she will cover her nest with these; but if not, she will take no trouble to collect them from a distance. Her determination to sit, will be known by her constantly remaining on the nest, though empty; and as it is seldom in a position sufficiently secure against the weather or pilferers, a nest should be prepared for her, by placing some straw, with her Eggs, on the floor of a convenient out-house. She should then be brought home, and gently and kindly placed upon it. It is a most pleasing sight to witness the satisfaction with which the bird takes to her long-nest Eggs, turning them about, placing them with her bill in the most suitable positions, packing the straw tightly around and under them, and finally sinking upon them with the quiet joy of anticipated maternity.

Some ladies deem it necessary to turn the Eggs

once a day, but the Hen does that herself many times a day. If the Eggs are marked, and you notice their position when she leaves the nest, you will never find them arranged in the same order. A person who obtained ninety-nine Chicks from an hundred Eggs, took the great trouble to turn each Egg every day with her own hand, during the whole time of incubation. The result *appears* favorable; but, in fact, only amounts to this, that such officiousness did no harm with a good, patient, quiet creature like the sitting Turkey, but it would probably have worried and annoyed any other bird into addling her whole clutch. We will at once reject, as utterly absurd and unnatural, all directions to immerse or "try" the Eggs in a pail of water, hot or cold.

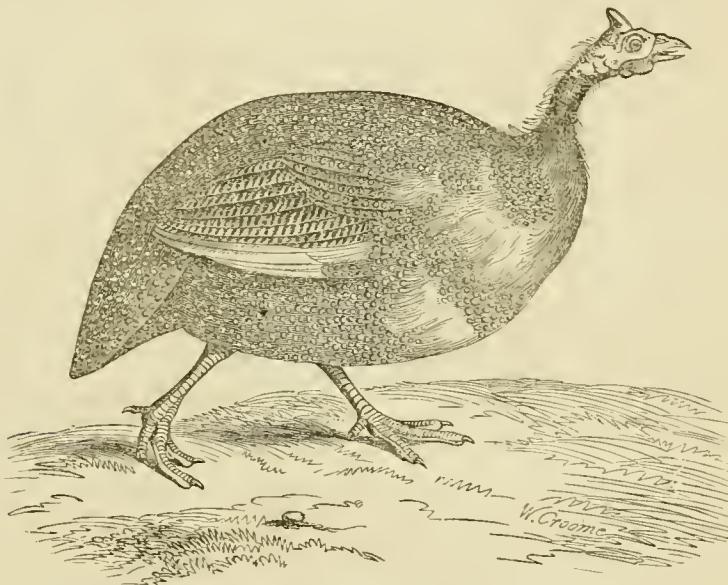
Give them nothing; do nothing to them; let them be in the nest under the shelter of their mother's wings, at least eight or ten hours; if hatched in the afternoon, till the following morning. Then place her on the grass, in the sun, under a roomy coop.—

If the weather be fine, she may be stationed where you choose, by a long piece of flannel-list tied round one leg, and fastened to a stump or a stone. But the boarded coop saves her ever-watchful anxiety from the dread of enemies above and behind—the carion-crow, the hawk, the rat, the weasel; and also protects herself—and will protect her young from the sudden showers of summer. Offer at first a few crumbs of bread; the little ones, for some hours, will be in no hurry to eat; but when they do begin, supply them constantly and abundantly with chopped egg, shreds of meat and fat, curd, boiled rice mixed with cress, lettuce, and the green of onions. Melted mutton-suet poured over barley-meal and cut up when cold; also bullock's liver boiled and minced, are excellent things. Barley-meal, mixed thick and stiff with water or milk, nettle-tops, leeks, goose-grass, or cleavers, and many other things, might be added to the list; but it is probable that a few of these may now and then be refused by some fanciful little rogues. I think I have observed that little Turkeys do not like their food to be minced much smaller than

they can swallow it: indolently preferring to make a meal at three or four mouthfuls than to trouble themselves with the incessant pecking and scratching in which Chickens so much delight. But, any rate, the quantity consumed costs nothing; the attention to supply it is every thing.—*Dixon & Kerr's Ornamental and Domestic Poultry.*

THE GUINEA FOWL.

This Bird, in some measure, unites the characteristics of the Pheasant and the Turkey, it has the delicate shape of the one and the bare head of the other. There are several varieties, as the White, the Spotted, the Madagascar, and the Crested. This latter is not so large as the common species; the head and neck are bare, of a dull blue, shaded with red, and, instead of a casque, it has an ample crest of hairy-like disunited feathers, of a bluish black, reaching as far forward as the nostrils, but in general turned backwards. “The whole plumage, except the quills, is of a bluish black, covered with small grayish spots, sometimes four, sometimes six on each feather.”



THE GUINEA FOWL.

The best way to begin keeping Guinea Fowls is to procure a sitting of Eggs from some friend or neighbour on whom you can depend for their freshness, and also, if possible, from a place where only a single pair is kept. The reason of this will be explained hereafter. A Bantam Hen is the best mother; she is lighter, and less likely to injure them by treading on them than a full sized Fowl. She will cover nine Eggs and incubation will last a month. The young are excessively pretty. When first hatched, they are so strong and active as to appear not to require the attention really necessary to rear them.—Almost as soon as they are dry from the moisture of the Egg, they will peck each other's toes, as if supposing them to be worms, will scramble with each other for a crumb of bread, and will domineer over any little Bantam or Chicken that may perhaps have been brought off in the same clutch with themselves. No one, who did not know, would guess, from their ap-

pearance, of what species of bird they were the offspring.

Of all known birds, this, perhaps, is the most prolific of Eggs. Week after week, and month after month, sees no, or very rare intermission of the daily deposit. Even the process of moulting is sometimes insufficient to draw off the nutrient the creature takes to make feathers instead of Eggs, and the poor thing will sometimes go about half naked in the chilly autumnal months, like a Fowl that had escaped from the cook to avoid a preparation for the spit; unable to refrain from its diurnal visit to the nest, and consequently unable to furnish itself with a great coat. As the body of a good cow is a distillery for converting all sorts of herbage into milk, and nothing else, or as little else as possible, so the body of the Guinea Hen is a most admirable machine for producing Eggs out of insects, vegetables, grain, garbage, or whatever an omnivorous creature can lay hold of.—*Dixon & Kerr's Ornamental and Domestic Poultry.*

REMARKS ON ENTOMOLOGY

Chiefly in reference to an Agricultural benefit.

BY W. D. BRINCKLE, M. D.

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CONCLUDED.
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Other insects of a different Order often commit extensive ravages on our staple crops.

Wheat, so essential in its diversified forms of manipulation to our comfort and sustenance, and constituting what is emphatically termed the staff of life, is subject to the depredations of many insects. Some of the most destructive of these are the Hessian Fly, (*Cecidomyia destructor*), the Orange-colored Gnat, (*Cecidomyia tritici*), Miss Morris' wheat midge, (*Cecidomyia culmicola*), the Joint-worm, the Augoumois moth, and the Wolf, (*Tinea granella*). These insects are pernicious only in their larva state; and each attacks a separate and distinct part of the plant.

The larva or maggot of the Hessian Fly is usually found between the base of the leaf and the main stalk. Two broods of this insect are produced annually—one in the spring and one in the autumn. In October, the female deposits from twenty to thirty eggs, on the leaves of wheat, soon after the plant appears above the ground. These eggs are cylindrical in form, of a pale red color, one-fiftieth of an inch long, and one-five-hundredth of an inch in their transverse diameter. They are hatched in from four to fifteen days. The diminutive maggot, at first of a reddish color, crawls down the leaf, insinuating itself between it and the main stalk, till it reaches a joint, where it remains, with its head downwards. It continues stationary in this situation, sucking the juices of the plant, for four or five weeks, when it becomes fully grown, measures an eighth of an inch in length, and ceases to eat. The skin now hardens, assumes a bright chestnut color, and has some resemblance to a flax-seed. In this flax-seed or pupa state it remains till April or May, when it becomes transformed into the perfect or winged insect. Copulation then takes place, soon after which the eggs for the autumn brood are laid.

The larvae of the Orange-colored Gnat are found in the ears of wheat; where they feed on the pollen, and the germ destined to form the future grain, till they complete their growth. Then, after moulting, they fall to the ground, where they burrow to the depth of half an inch and undergo their final metamorphosis. The perfect insect does not emerge from its pupa case in the ground till May or June; when it makes its appearance about the time the wheat is in blossom, and after copulation lays its eggs in the scales of the florets or in the center of the corolla. In eight or ten days, these eggs are hatched into little footless maggots; which, when fully grown, are an eighth of an inch long. By feeding on the pollen, they essentially interfere with the fecundating process, and thus occasion many of the grains to be abortive. In this way, a twentieth part of the crop, not unfrequently, is destroyed by them.

The larva of Miss Morris' wheat-midge inhabits the cavity in the center of the straw. In June, the egg is deposited in the grain while in the soft or milky state, and remains unhatched till the wheat has been sown and has germinated. The young larva soon ascends the stalk, which it penetrates above the top joint, and enters the cavity in the centre of the culm, where it feeds, with its head downwards, till it acquires its full growth. It then passes down the center of the straw, cutting through the joints, till it reaches the root, when it emerges from the interior

of the culm, ascends the stalk on the outside, attaches itself firmly to the straw, passes into the flax-seed or pupa state in its larval skin, and completes its final change in May or June. Before the larva arrives at maturity, the straw very frequently becomes so hard, that the worm, when done feeding, is unable to cut through the joints and make its exit at the root in its usual way. Under these circumstances, its transformations are completed within the cavity of the culm, where the imago must eventually perish, unless liberated from its confinement by some fortuitous means. Thus it appears, as Miss Morris has remarked in her communications to the American Philosophical Society, and to the Academy of Natural Sciences of Philadelphia, that this destructive insect may be transported from place to place, and even from one country to another, in wheat straw, as well as in the wheat itself. The *Cecidomyia culmicola* has been confounded with the true Hessian fly, which it resembles in appearance, and perhaps equals in its destructive ravages on the wheat crop. Under the impression that Miss Morris was describing the *Cecidomyia destructor*, her facts were called in question, and a controversy ensued.—The accuracy, however, of her observations have been triumphantly established; and it is now conceded that the insect described by her is one which had escaped the notice of other Entomologists.

The larva of the joint-worm dwells in the parenchyma or substance of the sheath, near its junction with the stalk; and can only be seen by cutting into the excrescence or blistered spot which constitutes its abode. Whether or not this insect prevails to any extent in Pennsylvania I am unable to inform you. But in some parts of Virginia, the injury done to the wheat crop is sometimes very considerable.

The *Augoumois* moth and the *Wolf* are two insects of another Order (Lepidoptera) that occasionally in their larva state attack the growing wheat; though their principal depredations are committed on the grain stored in garners.

Several insects, belonging to the Coleopterous Order, also do incalculable injury to stored up grain.—The most destructive of these is that which has been pre-eminently termed "the weevil" (*Calandra granaria*), one of the Rhyncophora. It is a minute insect, only one eighth of an inch long. The female deposits a single egg in each grain, the interior of which is entirely consumed by the larva.

It has often been observed, that when the insects, just noticed, as attacking the wheat crop, have increased to an alarming extent, a diminution in their numbers suddenly and unexpectedly takes place, causing the wheat fields on the ensuing year to be, in a great measure, exempt from their depredations.*—Several causes combine to produce this happy and unanticipated result. To one of them—insect enemies—your attention will now be directed. These enemies are the Ichneumons,—a tribe of insects, belonging to the Hymenopterous Order, and embracing many genera and species. They are all parasites; and by checking the increase of the herbivorous or plant-feeding insects, prove the great insect benefac-

*Since the above was written, I have received a copy of the Transactions of 1850 of the N. Y. State Agricultural Society, 108 pages of which are occupied with an able Report of an Agricultural Survey of the county of Seneca, taken under the direction of the State Society, by John Delafield, Esq. From this report we make the following extract: "In the year 1849, the Wheat crops of Junius, Tyre, Waterloo, Seneca Falls and Fayette, exhibited the effect of the wheat fly's presence, they destroyed nearly one-fifth of the crops of these towns. In 1850 the evil was abated, and but little loss experienced; this immunity was unexpected, and it is worthy of enquiry by Entomologists, how far the climate, season and condition of the crops may have presented obstacles to the easy deposit of the egg, or what other cause so suddenly and effectually checked the increase of the wheat fly."

tors of our race, although many of them are so minute as scarcely to be visible to the naked eye. Some of them puncture, with their ovipositor, the eggs of the noxious wheat insects above alluded to, and place in them an egg of their own which soon hatches, and the little internal egg-parasite there lives, feeds and grows, till it has completed its larval and pupal stages, when it emerges a little winged ichneumon.—Other species of ichneumon lay their egg within the larva and pupa of the Hessian Fly and its allied wheat midges, where it hatches, feeds and passes through its several transformations. Although these internal parasites do not kill the larva while feeding on the adipose tissue contained in their bodies, yet they eventually either deprive them of the power of completing their final metamorphosis, or cause them to pass through it in such an enfeebled condition as to be incapable of perpetuating their kind. These impediments to the multiplication of the noxious wheat insects must necessarily prevent their increase in a ratio equal to that of their ichneumon foes. Consequently the latter will gain the ascendancy, and then the sudden disappearance of the former is the natural and inevitable result.

On seeing these ichneumon parasites in great numbers in wheat fields infested with different species of *Cecidomyia*, many persons have very naturally attributed to them the destruction of their crop. This conviction, they conceived, was corroborated by the fact that these ichneumons have been seen to emerge from the eggs and pupa of the Hessian Fly and its allied wheat midges. But the remarks already made will give you the true explanation of this adventitious occurrence.

Immense numbers of butterflies, moths, grass-hoppers, borers, plant-lice, and a great variety of other insects injurious to vegetation, are, in this way destroyed by these parasites.

Besides the ichneumons, certain other insects of the *Hymenopterous Order* are also parasitical.

Nor are the insect parasites confined to the *Hymenoptera*. Some of the two-winged flies (Diptera) possess the same habits; hatching and feeding within the bodies of various kinds of caterpillars until they are about to complete their final metamorphosis.

The Predaceous Insects constitute another class that are exceedingly beneficial to the Agriculturist. Among these are many of the beetles, the sand-wasps; the dragon-flies, the Earwig (*Forficula Auricularia*) but more especially the Lion of the Aphides, (*Chrysopa perla*.) several varieties of the Lady Bird (*Coccinella*.) and some of the Syrphian. The three last-mentioned predaceous insects while in the larva, and the Lady Bird even in its imago state, prey exclusively on the different species of plant-lice. In conjunction with one or two minute varieties of ichneumon, they are the natural enemies of the *Aphis*; and where they abound, prove amply sufficient to secure vegetation against its exhausting ravages, notwithstanding the extraordinary rapidity with which it multiplies.

The *Aphis* or plant-louse is probably the most prolific of all insects. A single female, in the fifth generation, may have a progeny of five thousand million; and sometimes there are fifteen or twenty generations in a year. A most remarkable fact in relation to the propagation of the plant-house, is the sufficiency of one copulation to cause the female descendants of every subsequent brood, for a twelve-month, to continue the re-production of the species. In the autumn, the sexes pair, and the female lays her eggs; after which the races for the time becomes extinct. In the spring the eggs are hatched, and the young are all females and wingless. They very soon arrive at maturity,

and continue to re-produce their kind, not by laying eggs, but by bringing forth their offspring alive.—Generation thus succeeds generation, without the agency or even existence of a solitary male until autumn; when a brood is hatched containing winged individuals of both sexes; and then the anomalous mode of perpetuating the species, just alluded to, terminates for the season.

The fecundity of many other insects is also truly wonderful. The Queen Bee lays forty or fifty thousand eggs in a year;—the Ant between four and five thousand;—the Silk-worm four or five hundred;—the Wasp three thousand:—and some species of Moth, in the third generation, increase to more than a million.

When we contemplate the immense number of species of insects, the countless individuals embraced in each, and their amazing powers of re-production, we cannot wonder at their being every where so abundant, and at times so operative in controlling our destiny. The earth, the air, the water, teem with innumerable tribes. The food on which we subsist, the clothes we wear, our mansions, our furniture, our books, all the productions of the vegetable kingdom, in fine every form of organic matter however diminutive or however colossal, are subject to their depredations. And though individually so small and insignificant, collectively they are capable of accomplishing results of vast moment for good and for evil. Such indeed is their wonderful voracity and procreative powers, that, without the intervention of counteracting influences, vegetation would be utterly destroyed.

In the construction of the Universe, the Divine Architect, whose creative conceptions and consummate arrangements display the perfection of wisdom, formed it a harmonious whole, amply provided with well regulated checks and balances. So long as these adjusting powers were not disturbed by extraneous forces interposed by human agency, an inordinate increase of noxious insects was restrained, chiefly by the physical operation of the elements, and by the instinct and natural propensities of certain insectivorous animals. Among the latter, may be enumerated many of the smaller quadrupeds,* reptiles,† insectivorous birds,‡ bats, our domestic poultry and the parasitic and predaceous insects to which we have already alluded. The harmony of creation, however, has been interrupted by the wanton destruction of birds and reptiles, and by the intervention of other causes. In consequence of this derangement in the economy of nature, the insect-vegetable-feeders have become more abundant, and necessarily more destructive.

To counteract the increase of noxious insects, it is necessary that artificial appliances should be called into requisition. But to employ them successfully, the insects that produce such wide-spread devastation should be known to us, not only in their perfect form, but in every stage of their being. We should know on what food they subsist, whether they take it by suction or mastication—the duration of their larval, pupal and imago periods—and their habits. We should know the size, form, color, and usual number of their eggs—the season of the year when laid,—their usual locality and arrangement, as well as the length of time required for hatching. Finally, we should know their natural enemies, especially those belonging to the insect class.

How all this information is to be obtained by the farming community, is a question of no little import-

*Mice, Moles, Squirrels, the Hedge-hog, &c.

†Snakes, Lizards, Frogs and Toads.

‡Woodpecker, Martin, Swallow, Night-hawk, Whippoorwill, Crow, Blackbird, Robin, Wren, &c.

tance. It cannot for a moment be presumed that our practical agriculturists, whose time is so thoroughly occupied by the cares and labors of their husbandry operations, have the leisure or inclination to glean it from the massive and voluminous tomes on Entomology, written as they are, for the most part, in language unintelligible to them. It is true, several valuable European publications, of a popular character, on insects destructive to vegetation have been issued. Among these are Ratzburg's "Die Forst-Insecten;" published at Berlin; and a treatise on "insects injurious to gardeners, foresters, and farmers" prepared under the auspices of the Austrian Government, by Vincent Kölle, and translated from the German by J. and M. Loudon, with notes by J. O. Westwood. Most of the insects described in these works, however, are peculiar to the Old World, or are less abundant and less destructive with us, than some others that are indigenous to our own country.

Being impressed with the great importance of having the animal, vegetable and mineral productions and resources of the State fully developed, *Massachusetts*, so early as 1830, authorized the commencement of a series of investigations, which resulted in the publication, at the expense of her Commonwealth, of several valuable documents, having an agricultural bearing. Among these is an able Report by Dr. T. W. Harris, on the insects of Massachusetts injurious to vegetation, issued in 1841, more than ten years ago. The history of this Report was communicated to me in a letter, from this distinguished Entomologist, in reply to one I had written to him on the subject, and is of so interesting a character as to induce me to lay it before you.* In it you will perceive that Massachusetts, not satisfied with the entomological information which she had caused to be widely diffused, among her agricultural population, has already authorized the publication of another edition of this useful work. On this second edition, which will no doubt be much enlarged and greatly improved, the accomplished author is now engaged.*

Will Pennsylvania do less for the advancement of her agricultural interests than the Bay State has done for those of Massachusetts? We trust not.—An able Entomological Report, written in familiar language and adapted to the exigencies of our own Commonwealth, would impart to her rural population the entomological knowledge they so much need and ought to possess. Then would they be able to recognise the insects that at times produce so much injury to their crops, as well as those that are of a beneficial tendency. Then would they be furnished with the most approved natural and artificial means of combating their destructive ravages.

Such a report would also accomplish other results quite as important as those now mentioned. By imparting general and correct views of insect life, a spirit of enquiry and investigation into the economy, habits and transformations of the many insects within our borders would be engendered. Close, attentive, and well directed observation on these points, by our agriculturists, would probably lead to the adoption of more efficient counteracting remedies against insect predations than any hitherto employed.

*See Appendix.

Although the State of N. York has nobly and generously incurred an expenditure of nearly \$100,000 in her geological surveys, and in acquiring and disseminating information concerning her beasts, birds, fishes, reptiles and shells, accompanied by beautiful and expensive engravings, she has hitherto done comparatively little in the department of Entomology. Nevertheless, the efforts she is so zealously and successfully making to promote her agricultural prosperity, warrant the belief, that ere long the Empire State will, with her usual liberality and sagacity, bestow on insects the consideration to which their number and importance entitle them.

Permit me, then, to press upon you the importance of urging our State Government to legislate at once on this subject. Let a bill be laid before the General Assembly, during its present session, making the necessary provision for appointing an Entomologist to draw up a Report on the Insects of Pennsylvania injurious to vegetation, as well as those that are beneficial, with outlines or colored illustrations representing them in every form of their existence. The triumphant passage of a bill of this kind cannot for a moment be doubted.*

In connection with this subject, the propriety of recommending legal enactments for the protection of Insectivorous birds, is also worthy of your calm and serious deliberation.

Sooner or later, these and various other measures, necessary to the elevation of the agricultural position of our Commonwealth, must and will be carried out. The only question is as to time. Whether their accomplishment be remote, or nigh at hand, must in a great measure, depend on the zeal and energy with which the State Society urges their consummation.—The present moment is auspicious; agriculture is every where receiving an onward impulse!—down-trodden as are the masses in the despotic governments of Europe, yet are the agricultural communities even of those countries now receiving from their Rulers, aid the most important—the most efficient.† Shall similar facilities be withheld from the rural population of Pennsylvania? We await the response from her Capitol.

[APPENDIX.]

DR. HARRIS' LETTER TO DR. BRINCKLE.

CAMBRIDGE, Mass., Sept. 10, 1851.

Dear Sir,—The report to which you refer is out of print, and a new edition of it was authorized by a Resolve of the General Court of Massachusetts, passed in May, 1850. I am now at work on this new edition, the printing of which will probably be begun in the course of the next winter; but as my time is necessarily much taken up by my official duties in the Public Library of Harvard College, the work will make rather slow progress. The history of my report is this:

On the 5th of June, 1830, in consequence of the recommendation of His Excellency, Levi Lincoln, then Governor of Massachusetts, the General Court of Massachusetts, "Resolved that His Excellency, the Governor, by and with the advice of the Council, be and hereby is authorized to appoint some suitable person to make a geological examination of the Commonwealth, in connection with the general survey, &c.," which had been previously authorized, March

*Such an entomological report, in which the insects noticed are arranged under their various Orders, with appropriate introductory remarks to each Order, and accompanied throughout with minute and comprehensive explanatory notes, would become an able Manual of Entomology that could not fail to be productive of the most extensive usefulness to our agricultural population.

†Such as the establishment of a State Agricultural College—the introduction of books on agricultural and collateral subjects into the rural public schools, &c.

It appears from the report of the Commissioners recently appointed by the Commonwealth of Massachusetts on the subject of an agricultural school, that in Russia there are 65 such institutions established—in Prussia 32—Austria 33—Bavaria 35—the other Germanic States 28—Great Britain 70—France 75—Belgium 9—Italy 2; making an aggregate of 352 European Agricultural Schools in full and successful operation. While alas, in the United States, with a republican form of government which recognises, as the basis of all legislation, the happiness and welfare of the people, the great body of whom are engaged in rural occupations, not a solitary Agricultural College or School has been established either by individual States or by the National Government. Nor has an Agricultural Bureau yet been organized, though it has been urgently solicited, and its importance and necessity universally conceded.

3d, 1830. The Governor accordingly commissioned Prof. Edward Hitchcock, June 26, to make the Geological Examination and to report thereon. On the 2d February, 1831, Prof. Hitchcock was directed "to annex to his report a list of the native Mineralogical, Botanical and Zoological productions of the Commonwealth." This report was ordered to be printed in 1832, and to be distributed. The result was the first edition of Prof. Hitchcock's "Reports on the Geology of Massachusetts," printed in one vol. octavo, at Amherst, Mass., in 1833. Before the work was finished, Professor Hitchcock requested me and others to furnish lists of animals and plants to be inserted in the appendix to the work, which will be found to contain my first catalogue of the insects of Massachusetts. In conformity to a Resolve of the Legislature, passed Feb. 17th, 1834, a new edition of Prof. Hitchcock's Report was prepared in one vol., 8 vo., at Amherst, in the year 1835. This contained an enlarged catalogue of the insects, which Prof. Hitchcock requested me to furnish, together with catalogues of the other animals and plants, prepared by several scientific gentlemen. On the 12th of April, 1837, agreeably to a recommendation of His Excellency, Edward Everett, the Governor, the General Court "Resolved that the Governor, with the advice and consent of the Council, is hereby authorized and requested to appoint some suitable person or persons to make a further and thorough survey of this Commonwealth, under his direction, particularly in reference to the discovery of Coal, Marl, and Ores, and an analysis of the various soils of the State, relative to an agricultural benefit. And he is hereby authorized to draw his warrant from time to time, upon the Treasurer of this Commonwealth, for any sum not exceeding \$2,500 for the foregoing purposes." The Governor, with the advice of the Council, thought best to give an enlarged interpretation to this resolve, so as to include as full an account of the animals and plants of the Commonwealth as could be obtained consistently with the means provided and with the spirit of the resolve, which pointed particularly to the agricultural benefits to be derived from the explorations. For the execution of this resolve, Prof. Hitchcock was appointed June 10, 1837, to continue the Mineralogical and Zoological survey; and Mr. George B. Emerson, Professors C. Dewey, E. Emmons, Rev. W. B. O. Peabody, and Drs. T. W. Harris, D. H. Storer and A. A. Gould were commissioned to take charge of the Botanical and Zoological surveys. The several portions of the work were distributed by agreement among these persons, and the department of insects devolved upon me. Other resolves, authorizing the printing of the several reports, and making appropriations for the same were subsequently passed, and the following works by the Commissioners, have been prepared, printed, and distributed gratuitously.

"Final Report on the Geology of Massachusetts. By Edward Hitchcock, 2 vols, 4 to., Amherst, 1841."

"Reports on the Ichthyology and Herpetology of Massachusetts. By D. H. Storer; and a Report on the Ornithology of Massachusetts. By W. B. O. Peabody, 1 vol. 8 vo. Boston, 1839."

"Report on the Herbaceous Flowering Plants of Massachusetts. By C. Dewey;—and Report on the Quadrupeds of Massachusetts. By E. Emmons, 1 vol., 8 vo. Cambridge, 1840."

"A Report on the Insects of Massachusetts injurious to vegetation. By T. W. Harris, 1 vol., 8 vo. Cambridge, 1841."

"Report on the Invertebrata of Massachusetts, comprising the Mollusca, Crustacea, Annelida, and Ra-

dia. By A. A. Gould, 1 vol., 8 vo. Cambridge, 1841."

"A Report on the Trees and Shrubs growing naturally in the Forests of Massachusetts. By G. B. Emerson, 1 vol., 8 vo. Boston, 1846."

The Zoological and Botanical Commissioners received, if I mistake not, about \$300 apiece for their services.

Taking into consideration the letter of instructions, in which Gov. Everett pointed out, as particularly desired, the economical and agricultural application of our remarks, and upon consultation with Mr. Emerson, the Chairman of the Commission, I concluded it best to confine my attention in the report principally to the insects injurious to vegetation; but to meet a general want that had been observed of an introductory work on our insects, I gave some general account of the subject, and arranged the insects treated according to a scientific classification of them, putting the whole, however, into such plain and familiar language as to be intelligible, I hoped, to uneducated readers. That the work has, to some extent, served the purpose for which it was designed, may be gathered from the fact that the whole edition of 1500 copies (together with an impression of 250 copies extra, printed at my private expense,) has been exhausted, and that a new edition has been called for, and ordered to be prepared and printed at the public expense. No provision, however, has been made for the execution of figures to accompany the work; and, indeed, our artists are not only unskilled in such kind of illustrations, but their charges are so extravagant as to place these illustrations beyond the limits of any reasonable appropriation.

Having now answered your enquiries in full, I beg to express a hope that the State of Pennsylvania may do something to promote investigations on the interesting subject of insect history and insect depredations. There already exists in your State an Entomological Society, consisting of several active members, and skillful naturalists, such as Dr. Melsheimer and Prof. Haldeman, who would be fully competent to undertake a work on the subject of destructive insects.

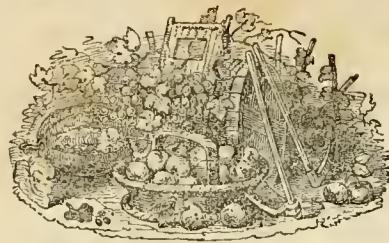
With respect, your most obedient,
THADDEUS WILLIAM HARRIS.

Dr. W. D. Brinckle.

The London Quarterly Review, for January. Leonard Scott & Co., 79 Fulton street, New York.

The re-publication of the foreign Quarterly Reviews by Messrs. Scott & Co. places the productions of the ablest writers of Europe within the reach of the American reader, at so cheap a rate that every one should possess them. Embracing the views of the three great parties in England, they become almost indispensable to a correct understanding of the nature of the great political events transpiring in Europe. The London Quarterly is the organ of the Tory, the Edinburgh Review of the Whig and the Westminster of the Liberal party. For the benefit of those who wish to subscribe for these valuable reprints, we give below the terms upon which they are offered by the publishers.

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Horticultural Department.

For the Farm Journal.

Shrubs and Trees for Hedges.

In continuation of my paper on the subject of hedges in the October number of the Farm Journal, I would add—The *Viburnum prunifolium*, or Shepberry tree, I believe might be used with advantage as a hedging shrub or tree; not often attaining more than 15 feet in height and six inches in diameter; very stiff and unyielding, with the ends of its spurs and branches performing the office of thorns, having similar properties as a hedge plant, with the buckthorn; and not so entirely occupying the adjoining ground with its very fine fibrous roots; and beside, being a native shrub remarkably adapted to some localities.

The Wild Plum *Prunus Americana* of Marshall will make an excellent hedge in suitable soil. I planted some stones of the wild plum in my garden to raise stocks for grafting other fruits on. They were grafted at probably two years old, but the grafts did not grow, and each stock sent up several suckers, which were permitted to grow two years; (I believe with a view to grafting,) At the end of that time the row was a sufficient hedge of 6 feet or more in height, very stiff and thorny. To what extent this tree would bear trimming I do not know; but when used as a stock for grafting, even the slow growing varieties of the common plum upon; the graft usually overgrows the stock. It is a long lived tree, grows slowly, but attains a diameter of a foot or more.

The English Sloe *Prunus Spinosa* would probably be more easily managed as a hedge plant, but would require more time to make an effective hedge as it does not grow so vigorously—Thirty years ago, a hedge of this kind remained on the Bartram Farm near Philadelphia. It had the appearance of having been a good hedge, but had then been neglected for some time.

The Sea buckthorn *Hippophae rhamnoides*, is a European shrub or tree, found from Italy to Lapland, generally near the Sea. It is a hardy, free growing shrub, attaining a height of 15 feet or more, stiff and armed with short thorns. It grows well on common soil and I judge, would make a good hedge; but as it naturally grows in wet situations, it is probably the best thorny plant for hedging in wet or low grounds. The leaves and young shoots of this (and of the Shep-

herdia next described) are of a dull white or silver color; and therefore, these shrubs may be used with advantage by the skillful landscape gardener where hedges are required in pleasure grounds or ornamental plantations.

Shepherdia Argentea or Buffalo berry was first introduced by Long's party from the Rocky Mountains, and is described as being abundant there—Nuttall in his continuation of Michaux' *Sylva*, says that the great use of this plant will be for hedges or live fences; and describes a standard tree in Winships Nursery near Boston, as 20 feet high, and as large as an apple tree. I have seen accounts of hundreds of thousands of seedlings having been sent to Europe, but it is little known here. It produces fruit at 10 feet high in very great abundance. The fruit is of the form, color, and about half the size of a common red currant. As to growth and armature, this tree may rank with the Buckthorn and I judge will be found at least equal for hedging.

Of the *Mespilus pyracantha* or evergreen thorn, I have seen one hedge, on a bank supported by a low wall, separating an ornamental plantation from the public road. As a hedge I believe it would have been sufficient for a farm enclosure without the wall. From observations, made on this plant, which I have cultivated many years as an ornamental shrub, I believe that with some care in staking and tying up the branches for two or three years, (not requiring more time than is usually required to trim and head down) a hedge could be made sufficient to turn men, horses and cattle. It is evergreen, or nearly so; in mild winters retaining its leaves till spring. In John Evans' grounds, in Delaware county, on the 9th of the present month, I saw a plant of this species about 12 feet high; variegated with a profusion of red berries, forming, with its brownish green leaves, the most beautiful object in a large collection of rare and beautiful plants. As a shrub it is naturally straggling, throwing out long slender branches, nearly horizontally, but is easily kept trained as an upright shrub. This straggling habit may increase its value as a hedge plant, it being armed with short sharp thorns.

ALAN W. CORSON.

Montgomery co., 1st mo. 22d, 1852.

For the Farm Journal.

Effect of Frost on Peach Trees, &c.

MR. EDITOR:—Hereabouts the severe frost—(8°@ 16°)—has proved destructive to the peach crop. In low situations it is difficult to find a fruit bud that is not black at heart; a few only, of the smallest, most compact, and ripest buds are yet uninjured. In wet ground, where the sapvessels were replete, the trunks of the trees have in many cases been rent by the intense cold.

Those who feel a natural hesitancy about pruning off branches which promise fruit, may take advantage even of this disaster, by giving their trees a

hearty "shortening in" to induce new and vigorous shoots. It should be well remembered that the peach tree only bears on young wood, and long, naked, sun and wind, and time-dried branches, convey sap no better than choked and rotten pipes convey water. Such trees should have the top reduced one half or more, and if healthy sprouts issue *near* the ground, the tree may renew its youth. If sprouts issue *from* the ground, it becomes difficult to rid them of worms. On this account there should be but a single shoot stem.

Of late years our peach trees lose their first leaves every spring; the leaves become curled and blistered and eventually fall off. Towards midsummer, new leaves issue, and the functions of growth proceed; but this late growth does not ripen fully, and the trees suffer (in consequence?) much more from frost than they formerly did. This disease is universal here, affecting, it may be said, every tree, and on that account is perhaps more injurious than even the yellows.

Will some of your correspondents who are expert in Peach-culture pronounce upon this. All lovers of good peaches, and all who find themselves benefitted by their use, (which classes every body, I believe, without exception,) will be advantaged by any information that will lead to a restoration of fruitfulness and vigor to the peach tree.

The inner side of the diseased leaves is often covered with aphides. Are they a cause or a consequence? Infusions of tobacco and other applications usually applied to destroy aphide, do not appear to remedy or mitigate the evil.

W. G. WARING.

Boalsburg, Pa., Feb. 16th, 1852.

For the Farm Journal.

Caterpillars--Black Knot.

MR. EDITOR:—Desirous of information on a subject which interests me much, I know of no way that I can obtain it better than by making a request through the columns of your very valuable Journal. When the great prejudice against "Book Farming" shall be removed, when we find the Journal in the hands of every farmer and its teachings followed, when "Agricultural Chemistry" shall be studied and practised, and the "good old way" cast aside, then our farms will assume a different appearance, and our farmers be more amply rewarded for their labor.

Every summer my fruit trees are covered with millions of caterpillars. I have followed the advice of my neighbors, in endeavoring to destroy them, but hitherto without any good result. Before the young caterpillars move from their nests in the morning, I have taken the nest and all in my hand, and crushed it. I have tried tow and turpentine, and I have tried blowing them off with a gun; but in a week after performing these operations, my trees would be full again. It has been three years that

my trees have thus been affected. The caterpillars completely divest them of their foliage, and I lose my fruit.

My plum trees also suffered much from what I supposed was the drought of last summer. Every branch is now covered with knots. The only way I know of removing them, is by paring them off smoothly and even with the branch, for if I attempt to cut them out altogether, it would be as well for me to cut the tree down at once. But if these knots extend entirely through the branch, which I believe they do, I see no way of preventing that part of the branch from dying—the sap cannot pass through these "tumors." I seen in some works on farming, that a long spell of warm weather causes it. I have however, two trees of the same sort of plum, which stand within a few feet of the affected ones, and they are perfectly sound. Many of my plums rot on the tree, before they get ripe, and numbers of them fall—they are all planted in good earth. Most of them are in my garden, with a fair exposure to the sun, and all of them are young. Now cannot some of your subscribers tell us of a remedy for Caterpillars and knots on Plum trees? Many of them know a remedy, and if they would only communicate it, perhaps it might be of service to many whose trees suffer like mine.

Much fruit is lost annually by frost. If persons would take the trouble to pack snow around the base and trunk of the tree, they would find it of advantage. It keeps back the blossom, and the tree does not come in bloom until we can fairly count upon no more cold weather.

Yours truly,

W. D.

Gwynedd, Montgomery co., Feb. 19, 1852.

[The warts or knots referred to above, are very common to the plum and several varieties of the cherry, and are generally supposed to be produced by the punctures of beetles, and are the residence of their grubs. Dr. Peck says, the seat of the disease is in the bark. The sap is directed from its regular course and is entirely absorbed by the bark, which is very much increased in thickness; the cuticle bursts, the swelling becomes irregular, and is formed into black lumps, with a cracked, uneven and granulated face. One of the best remedies for the black knot, where the disease has not extended itself too widely, is to cut off the limb below the tumor and burn it.—Where this course would involve the destruction of large branches, another remedy may be tried, which is, to cut out the warts until every vestige of granulated matter is removed. Then rub the cut part with common salt. However, the most proper and effectual plan is to examine the trees carefully every spring, and so soon as there is any evidence of the black knot, let the branches on which they are found be amputated and burnt. We will offer some methods for the destruction of the caterpillars in our next.—En.]

For the Farm Journal.

The Evergreens of our Capitol.

MR. EDITOR:—Will you be kind enough to suppress your smile at the novelty of the subject of my communication, and allow me to say, that it is not to the evergreens within the capital that I refer, but to the evergreens that ornament the grounds around it.

The fine commanding elevation of these grounds, gives them attraction, which has been benefitted by the ornamental trees that are distributed along their walks, and within their lawns. The ornamental trees of these grounds are mostly *deciduous*, and of course, have little beauty in winter. But among these trees are a few species of our native evergreens, which do much to enliven the winter scene, and render cheerful and attractive, grounds which are occupied at a season when other trees are stripped of their foliage, and only have the feathery flowers of frost and snow.

The evergreens of these grounds are comprised of but four species; and these are all natives of our State. The largest of these trees is the White spruce (*Abies alba*) and the only one of its species or genus which ornaments capitol hill. Where are its fellows, the Black spruce, (*A. nigra*) with its thick dark shade, and the Hemlock spruce (*A. canadensis*) with its light and graceful foliage? These, too, are natives of our State, and equally ornamental. The hemlock is the tree of the north, and no winter scene is complete without it. Pennsylvania may be said to be its southern boundary, and from her high hills to the frozen north, it characterizes nearly every landscape.

Nearly resembling the spruce, but entirely distinct from it, is the Balsam Fir, (*Abies balsamea*). This is the dark conical evergreen with resinous terminal buds, that shows to such advantage from the steps of the capitol. There are perhaps a dozen trees of this species here. It is a beautiful tree as an ornament, and is interesting as affording the resin called Canadian balsam.

There is another evergreen with a thick dark head, composed of fan-like branches. This is the White cedar (*Cupressus thyoides*). In its appearance it resembles the Arbor vitae of the north, and is often mistaken for that tree. The white cedar is also a native of our State, but is not generally distributed. It becomes a beautiful tree by cultivation, but is wanting in those graceful airy forms, which distinguish many of our native evergreens.

The last tree to be found of our evergreens in these grounds is the Savin, (*Juniperus sabina*.) The singularly thick fastigate branches of this tree, with its berries clustered among its prickly leaves and matted branches, will distinguish it from any other tree on these grounds. It is, however, wanting in stately form, and holds its place as a connecting link between the lofty trees and the lowly shrubs. No other species of the Juipers, or of the Pines, or the Larch, Yew, the Laurel, or the Rhododendron

are found on these grounds, calling familiar scenes to the minds of those whose homes have been made cheerful by their shade. Might not every species of the evergreens of Pennsylvania be appropriately grouped on the enclosure that contains our State buildings, giving cheerfulness to the winter scene, and if grouped with the deciduous trees of our native growth, give a panoramic view of the forests of Pennsylvania.

If it is a subject of interest to your readers, I will give in some future numbers, a catalogue and description of the native forest trees of Northern Pennsylvania.

Yours, S. HAYDEN.

Athens, Bradford co., Pa., Feb. 20, 1852.

Pennsylvania Horticultural Society.

The stated meeting of this Association was held in the Chinese Saloon, Philadelphia, on Tuesday evening, February 17, 1852.

Gen. Patterson, on assuming the chair, took occasion to indulge in some very appropriate remarks, tendering his sincere thanks to the Society for having elected him unsolicited, their presiding officer. Observing that he could foresee the many obstacles that would be presented by following in the footsteps of no ordinary man; that the standard for efficiency in office was now placed so high, and he, from his long absence, being in a great measure, a stranger in the community, hoped that his administration would be looked upon with a lenient eye—that it should be his aim to perform the duties to the best of his abilities, and that until he should become fully acquainted with his new position, he would claim the indulgence of the Society towards any errors of commission or omission that might occur in the performance of them.

The display was excellent, for the season, and consisted of a large collection of Plants—fine specimens of Azaleas Spirreas, Ericas, Cinerarias, Stocks, etc., from Joseph Lovering's houses. Six large and very handsome Camellias, in half-flower, from Frederick Lennig's collection. A number of select rare plants—the *Illicium religiosum*, *Salvia gesneriacaflora*, (choice long bloomer) *Camellia j. var. Colletii*, *Metrosideras semperflorens*, &c., by R. R. Scott, gardener to J. F. Knerr. A large oblong stand of four elevations, covered with moss in which grew luxuriantly some fifty Hyacinths, exhibited by Peter Reabe, was an attractive object.

The designs of cut flowers and bouquets were very creditable. A tall vase-shaped design formed of the finest flowers, was shown by James Bisset, gardener to James Dundas. A large beautiful cone bouquet crowned with a bud of the Victoria, the forty-sixth from the same place, and a handsome basket of cut flowers, by Thos. Meehan, gardener to Caleb Cope. A fine basket and hand bouquet by Thomas Meghran, gardener to R. Cornelius, and another basket and bouquet by Alex. Burnett, gardener to Joseph Ripka.

Collections of cut Camellias were exhibited by John Sherwood, Robert Buist, James Ritchie, John Pollock, gardener to F. Lennig, and Benj. Gullip.

FRUIT—Thomas Hancock, Burlington, brought the “Eschasserie” and “Easter Beurre” Pears, and Wm. V. Pettit, the “Niles” Pear. A most beautiful Apple of good quality, brought from Paris, was presented by Charles Crugan.

Two large tables of vegetables were shewn by Thos. Meghran, gardener to R. Cornelius, and John Gal-

lagher, gardener to Miss Gratz; and fine forced Rhubarb and Early Radishes by Alex. Burnett, gardener to Joseph Ripka.

The following premiums were awarded—

By the Committee on Plants and Flowers—*Camillias*, for the best six plants named, to John Pollack, gardener to F. Lennig:—For the best six named cut flowers, to John Sherwood; for the second best do., to Robert Buist. *Plants in Pots*—for the most interesting collection, to John Miller, gardener to Joseph Levering; for the best design of cut flowers, to Jas. Bisset, gardener to James Dundas; for the second best do., to Thomas Meehan, gardener to Caleb Cope; for the best hand bouquet to Joseph Miller. For the best basket formed of cut flowers, to Thomas Meghran, gardener to R. Cornelius—for the second best do., to Thomas Meehan, gardener to C. Cope. And a special premium for a display of Hyacinths, to Peter Raabe.

By the Committee on Fruits—*Pears*, for the best the “Eschasserie” to Thomas Haneock. A dish of the “Niles” Pear was exhibited of good flavor. Also one of the “Easter Beurre” the latter would have been entitled, from their excellence, to the Premium but not a sufficient quantity were shown. The attention of the Committee was called to a single specimen of an Apple, directly from Paris, of good quality, and of a singularly beautiful appearance, presented by Charles Crugan.

By the Committee on Vegetables—For the best and most interesting display by a private gardener, to Thomas Meghran, gardener to R. Cornelius; for the second best do., to John Gallagher, gardener to Miss Gratz. Also a special premium for forced Rhubarb and early Radishes, to Alexander Burnett, gardener to Joseph Ripka.

The special committee to whom was referred the subject of a testimonial to the late President, reported that he be requested to sit for his likeness; which was agreed to, and ordered to be carried into effect.

A resolution authorizing the committee for establishing the names of fruits, to procure model fruits, was adopted.

A package of seeds obtained at the World’s Fair was presented, and the thanks of the Society ordered to the donor; and the seeds referred for distribution.

Notice was given by a member that at the next meeting he would move for the appointment of a committee to examine and report upon the condition of the green houses of the city and vicinity.

The President appointed the standing committees for the ensuing year.

Members elected—John G. Hoffman and W. C. Fowler.

On motion, adjourned. Tho. P. JAMES,
Recording Secretary.

Effects of the severe cold on Peach Trees.

Serious apprehensions are entertained in regard to the peach crop for the coming season. We are informed from various sources, that nearly all of the buds are frozen. In some few localities we learn that such is not the case, but the exceptions to the general destruction are, we fear, very rare. We have examined a number of buds, every one of which gave unmistakeable evidence of the destruction of the germ. Any one may satisfy himself of the fact by cutting open a bud, and if the small germ inside be of a black or brown color instead of green, there will be no fruit from that bud, although there may be a blossom.

THE FARM JOURNAL.

Assistant Editor’s Department.

A. M. SPANGLER, ASSISTANT EDITOR.

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TO OUR NEWSPAPER EXCHANGES.—We have on several occasions tendered, through our columns, thanks to our brethren of the newspaper press for the very kind and flattering notices given of the Journal.—They have been of great service to us, and we feel deeply indebted for them, and can but regret that it is not in our power to reciprocate the favor. We trust that we shall not be considered unreasonable, if in addition to the favors already received, we ask that they notice the fact, that with the present number our first volume closes; and that the liberal encouragement extended to the Journal during the past year, enables us to assure all who may feel disposed to subscribe, that it is now permanently established, and during the coming year it shall be our endeavor to render it still more worthy of general patronage.

To old subscribers.

Frequent inquiries have been made of us recently, whether old subscribers will be permitted to renew their subscriptions at club prices. As a general reply to these inquiries, we answer, *most assuredly*.—Our terms now, are the same as formerly, and we indulge the belief that not only shall we retain our old friends, but that our club lists (with large additions of new names) will be renewed.

To County Societies—An offer.

We will send a copy of the Farm Journal *gratis*, to every county or township agricultural or horticultural society in the State, the Secretary of which will inform us where the headquarters of the society are and furnish us with a list of the officers. Any information relative to the condition and prospects of the Society will also be very acceptable.

[We take great pleasure in asking the especial attention of our readers to the subjoined pedigree of the celebrated durham bull, "Rockland," bred and raised by James Gowen, Esq., of Mount Airy, Philadelphia county.

His owner, we understand, would have no objection to selling him to some spirited breeder or club of gentlemen, who would use him advantageously, Mr. G. having but a limited stock at present, and having two other young Durham bulls in course of rearing.]

**PEDIGREE of the Premium Bull, ROCKLAND,
Whose Portrait forms the Frontispiece.**

ROCKLAND—red and white roan—calved September 19th, 1848, by Bruce, a son of imported Prince of Wales, by Maggot, bred by the Rev. Henry Barry. Dam Victoria, a favorite Durham, of great milking properties, bred by the late Mannel Eyre, Esq., by Diego, a superior thorough bred Durham; gr. dam, Queen Bess, by Col. Powel's Frolic; gr. gr. dam, Leopardess, by Mr. Eyre's celebrated Durham bull Leopard, &c., &c. Rockland's dam, Lady, a Durham of superior dairy properties, and of extraordinary fine constitution, owned for several years by Mr. Gowen, formerly the property of Mr. Chorley—her sire, Traveller, a thorough bred Durham of replete milking stock; gr. dam, an imported Durham of the herd of Mr. Baneroft, &c., &c. Rockland was bred with the view of combining in him the properties of good milking with fine constitution, easy feeding, and early maturing. To this end, his dam, Lady, whose properties were well known, was chosen on the one side, and Bruce, son of imported Prince of Wales, on the other, he having an array of the best Durhams, in blood and individual qualities, of any Durham bull available.

At the annual Agricultural Exhibition and Cattle Show of the Philadelphia Agricultural Society, in October, 1850, Rockland was awarded the first premium, as the best two year old bull exhibited; and at the next annual exhibition he was awarded the first premium as the best Durham bull of three years old and upwards, in a class where the competition was both numerous and great. He likewise took the first premium, last October, at the State Agricultural Exhibition, held at Harrisburg, as being the best short horn bull exhibited.

SEND IN THE CLUB LISTS.—We respectfully request those who are getting up club lists for the new volume, to send them in at as early a day as possible, in order that we may know how large an edition to publish. They will not forget that we do not require the whole of the club to be sent to one office. We will mail the Journal to as many different post offices as may be required, and will receive additions to club lists at club prices at any time during the year.

**Advance of Scientific and Practical Agriculture in
In Pennsylvania.**

One of the most gratifying tendencies of the public measures of the present day is their practical character. Although speculative theorists are still numerous, and impracticable novelties are daily pressed upon the attention of the public, it is evident that they are fast losing ground; while those measures calculated to advance the interests and promote the comfort of society, are gaining a firm foothold with the people generally.

Science, like book-farming, was for a long time regarded as adapted to those classes of the community only, whose ample means gave them time for reading and investigation, and whose pursuits were calculated to amuse rather than profit. It was not until the mechanic arts had enlisted the powers of science in their behalf and triumphed over the former seemingly insurmountable obstacles that interposed between them and complete success, that the minds of men were directed to the importance of a knowledge of the principles which lie at the foundation of agriculture. The efforts of a few strong-hearted, noble souled men, to introduce a system of farming which should be an improvement upon "the good old way," were met with derision. But despite the opposition with which they were called to contend, these brave spirits persevered in the good work, until eventually, they triumphed over the prejudices opposed to them, and now, science and agriculture go hand in hand—twin sisters, dispensing blessings on every side.—"Book farming" is no longer decried as useless and unprofitable; and those who avail themselves of the practical experience conveyed through the agricultural publications of the day, are no longer regarded as mere theorists. This healthful tone of feeling is to be considered as the precursor of a system of farming in Pennsylvania, which cannot but operate powerfully upon her future prosperity. With the spread of scientific agricultural intelligence, we may rightfully expect increased crops, with lessened expenses.

"Knowledge is power," and the farmer whose mind is most thoroughly trained to familiarity with the principles of agriculture—who understandingly attends to the duties of his calling, is certainly more likely to succeed, than he, who blindly follows the lead of those who have ever stood opposed to the introduction of modern improvements. By this we do not desire to be understood as claiming *all* the merit for scientific theory. Men may theorize, but practice alone can realize. Theory can be valuable only when reduced to practice; hence, the man who combines the scientific with the practical, is the man who will eventually succeed best. Let the friends, therefore, of our State and national prosperity, not forget the duties resting upon them. If applied agricultural science is calculated to advance the interests of the farmer, then the duty of every friend of the

farmer is, to lend his influence to such means as are calculated to spread broadcast throughout our State and the Union, a knowledge of those branches of science which stand most intimately allied to successful husbandry. These means are various; but none appear to us so completely within the reach of all, as agricultural periodicals. Embracing, as all good publications of this class should, something upon every department of farming; and combining in a small space the practical experiments of hundreds of excellent farmers; they become to the observing husbandman, a source, not only of deep pleasure, but of large profit. Not that all the suggestions contained in them are to be adopted; or even a majority of them; but we cannot think that any attentive reader of the *Farm Journal* during the past year, can have failed to realize more than ten-fold the amount of his subscription, unless he was wilfully determined to disregard the many valuable truths, which have from time to time been presented through its columns. And the same may be safely said of other Journals of a similar character. Honestly believing this, we ask for it, increased support, and hope that those who have derived benefit from its perusal, will assist us in our efforts to spread still wider its good influences.

Protection by law to Fruits and Fruit Trees.

A bill is now pending before the Legislature which provides for the better protection of fruits and fruit trees, and we earnestly hope it may become a law. There is no class of the community so subject to intrusions and depredations upon their premises as the farmer and fruit grower. Orchards have come to be regarded as public property; and the owner who undertakes to protect them against predators is set down as mean and churlish. To our mind it is perfectly clear, that the trees and fruit in the farmer's orchard are as much his property as the goods and silver of the merchant; and as such, as fully entitled to the protection of the law. But, by one of those strange inconsistencies which sometimes characterize law-making, a farmer's orchard may be plundered almost with impunity, while the theft of a single penny from the till of the merchant, subjects the offender to imprisonment. For the sake of justice therefore, to a class of the community, who ask but little from our legislators in behalf of themselves, we hope this bill may pass.

In the vicinity of many large towns, the cultivation of fruit has been almost wholly abandoned. Those who for years attempted it, have given up in despair, their trees being broken down from year to year, and the fruit carried away by idle persons. The law which protects the fruit thief, gives direct encouragement to theft of all kinds. The man who will clandestinely rob a neighbor's fruit tree, we should be very loath to trust within reach of our purse, for we cannot conceive the theft of money, a crime of any greater magnitude than that of fruit.

National Agricultural Bureau.

At the last quarterly meeting of the Maryland State Agricultural Society, the following resolution in relation to the establishment of an Agricultural Bureau at Washington was adopted:

WHEREAS, the President of the United States in his last annual message called the attention of Congress to the establishment of an Agricultural Bureau at the city of Washington. Be it therefore

Resolved, That the thanks of this Society be, and they are hereby tendered to his Excellency, the President, for the interest which he has not only on the present, but on other occasions manifested in behalf of American husbandry. And be it further

Resolved, That this Society, regarding as it does, the paramount value of such an institution, at the seat of government, established upon liberal principles, to the success of an improved system of Agriculture in this country, a committee of _____ be now appointed to proceed to Washington in order to promote the establishment of said institution by using such efforts as may seem most appropriate in their judgments, as well as to press the subject respectfully upon the immediate attention of our Senators and Representatives in Congress, urging them to use their best efforts towards bringing up the matter for the consideration of their respective houses, at as early a day as practicable.

It will be remembered, that resolutions similar in substance were passed at the annual meeting of the Pennsylvania State Agricultural Society. The subject is one of vital importance to the interests of agriculture in the United States, and demands the earnest attention of Congress. A Department of Agriculture exists in France and other nations, and the most beneficial results have flowed from it. Why should not the same results follow in our country? Agriculture is our leading interest. Three-fifths of our population are engaged in it, and all are dependent upon it for the necessities of life. A National Agricultural Department at Washington, established upon such principles as would bring to its support the influence of all the State and County Societies, could not fail to give an impetus to the farming interest which would be felt in every section of our great country, and would do much to promote our national strength and greatness. We shall take up this subject again when we have more space and time than now.

We observe also, that the Maryland Society highly approves of the plan proposed by the Pennsylvania Society, for the formation of a National Agricultural Society. The President has been authorized to appoint a delegate from each Congressional district to represent Maryland in the Convention. We hope that other State Societies will follow up the good work and appoint delegates. Such a convention, representing fully the agricultural interests of the various States, would exert a vast influence in securing the passage of a law establishing a Department of Agriculture at Washington.

Complimentary Resolution.

It is with feelings of deep gratification that we give place to the following highly complimentary resolution, passed by the State Agricultural Society, at its last annual meeting. To find our humble efforts to build up a character for the Farm Journal endorsed by such high authority, is to us, a powerful incentive to future exertion. During the year which closes with the present number, we have labored "in season and out of season" to present such matter to our readers, as we supposed best adapted to their tastes, and calculated to promote their interest. We dare not flatter ourselves that we have given universal satisfaction, but we can with pleasure refer to the high testimonial of favor at the hands of the State Society, and might, if we had room, furnish hundreds of individual testimonials equally flattering. If our efforts to please have thus far been successful, may we not hope that with the coming year, our claim upon the favor of our subscribers will be increased. We think so; and therefore only ask that those who think approvingly of what we have done, will aid us by their contributions of facts and subscriptions to do still better for the future.

It was resolved by the Executive Committee, *that we deem the establishment and success of an Agricultural Journal published in Pennsylvania, as essential to the proper exposition of the principles of agriculture as practised in this State; and that we APPROVE OF THE PENNSYLVANIA FARM JOURNAL, published at the city of Lancaster, by A. M. Spangler, and edited by S. S. Haldeman.*

STATE AGRICULTURAL FAIR.—THE NEXT STATE FAIR.—At the last meeting of the Executive Committee, on Thursday, Feb. 6th, it was resolved that the next State Agricultural Exhibition should be held on the 20th, 21st and 22d of October. A committee consisting of the Hon. Fred'k Watts, James Gowen and David Mumma, to receive proposals from the different towns desirous of competing for the fair. All proposals must be addressed to Hon. F. Watts, Carlisle, Pa.

We observe that the New York State Fair will be held at Utica, on the 7th, 8th, 9th and 10th of September. The list of premiums having already been published.

Increase of County Societies.

The past year has been a proud one to the friends of agriculture in Pennsylvania. On every side, we behold the rich fruits of the labors of those who were instrumental in securing the organization and incorporation of the State Society. In almost every county of the Commonwealth an auxiliary Society has been formed, and we are pleased to observe that amongst those who have taken hold of them, are men who were never known to falter in a good cause.—We trust the work will not end here. Next fall will tell the tale. We shall be glad to hear from the Sec-

retaries of the different Societies, in order that we may be enabled to report to our readers, the progress agriculture is making throughout the State generally.

To our Philadelphia subscribers.

At the solicitation of quite a large number of our city subscribers, we have made arrangements with W. B. ZIEBER, South Third street, for the regular delivery of the Farm Journal for the coming year. By this arrangement we hope to obviate the difficulties which have heretofore stood in the way of the regular receipt of the Journal by our city subscribers. Notwithstanding every precaution on our part during the past year, frequent complaints have reached us, and as we desire to please all, we have arranged as above. Should any of our subscribers prefer having them by mail, and will notify us of their desire, we will continue to send them as heretofore.

LIBERAL SUBSCRIPTION.—The citizens of Lancaster city have raised, by subscription, twenty-five hundred dollars, to secure the holding of the next State Agricultural Fair at that city. This amount can be largely increased, if necessary.

CUMBERLAND NURSERIES.

THE proprietor of the above establishment, in calling the attention of the public to his present stock of Fruit and Ornamental Trees, Shrubs, Plants, Vines, &c., would call especial attention to his extensive stock of well grown and beautiful Apple Trees, embracing a complete collection, collected from several hundred varieties under culture at these Nurseries, and such only reserved for general cultivation, as have proven by actual test to be worthy a place in the prudent man's orchard; yet for the curious, or those who wish to test for themselves, he is prepared to supply in moderate quantities, nearly every variety enumerated in the catalogue.

In addition to the above, he has also a few hundred thousand extra large and fine Sweet Apple Trees, eight to twelve inches high, (for stock feeding,) which he will sell at from \$75 to \$85 per thousand, at the Nurseries, and no further charges for packing, simply to cover cost. These last are offered so unusually low on account of his wishing to clear a few acres of his ground this spring. All the above articles will be disposed of on the most liberal terms.

All orders, post-paid, enclosing the cash, or a satisfactory reference, will be punctually attended to, and all trees carefully labelled, packed, and forwarded to wherever ordered.

Address, DAVID MILLER, Jr.
Cumberland Nurseries, Carlisle, Pa.
March, 1852. 2m

1,000 AGENTS WANTED.

THE life of Louis Kossuth, Governor of Hungary, with notices of the distinguished Men and Scenes of the Hungarian Revolution. To which is added an appendix, containing Kossuth's Address to the People of the United States; and the most important of the addresses, letters and speeches of the great Magyar Chief. By P. C. Headley, author of "Life of the Empress Josephine," "Life of Lafayette," etc., with an introduction by Horace Greeley. In one elegant 12 mo. volume of 461 pp., with an accurate steel Portrait. Price \$1.25.

*** The publishers confidently believe that from the abundant materials in the possession of the author, together with his well known ability, that his Biography of the Great Hungarian Chief will not only be complete in itself, but well worthy to be ranked with the other popular productions of his pen.

N. B.—Agents wanted in every county in the United States, (not already occupied,) to sell the above popular work. It is believed that almost every reading family will be glad of the opportunity of possessing the Life and Speeches of the noble Hungarian. Such is the present indication from the unparalleled sale of the work.

Address, DERBY & MILLER,
Publishers of Popular Books, Auburn, N. Y.

March, 1852.

FRUIT AND ORNAMENTAL TREES, &c.

THE subscribers solicit attention to their immense stock of Nursery articles, comprising Standard and Dwarf Fruit Trees, for the Orchard or Garden, strong healthy and beautiful trees, of all the best varieties in cultivation. Hardy Ornamental Trees and Shrubs, for parks, cemeteries, pleasure grounds, doorways, &c.

Roses and Dahlias, Phloxes and Peonies, one of the best collections in the United States comprising every novel and fine variety to be obtained in Europe, selected by us in person.

Green House and Bedding Plants, comprising the newest and best Fuchsias, Chrysanthemums, Verbenas, Petunias, and other popular plants for Green Houses, or for the Summer decoration of gardens.

New and Rare Evergreens, such as Deodar Cedar, Auracaria (Chili Pine,) Cryptomeria, Pinus excelsa, &c., &c., the most complete collection. Besides all the common sorts in large quantities. All orders executed and forwarded in strict compliance with directions and packing done in a style so perfect as to secure the safe transmission of articles to the most distant points.

A general descriptive catalogue will be forwarded gratis to all who apply post-paid and remit postage 5 cts. under 500 miles, 10 cts. from 500 to 1000 miles.

A new catalogue of Dahlias, Fuchsias, Verbenas, Roses and Bedding Plants, for Spring of 1852, is just issued and will also be forwarded gratis.

ELLWANGER & BARRY,
Mount Hope Nurseries, Rochester, New York.

March 1852:

HIGHLY IMPROVED ESTATES AND VALUABLE TIMBER LAND,

On Lower James River, For Sale.

THE undersigned prevented by engagements, requiring his undivided attention elsewhere, from residing on his estate, will sell publicly, (unless previously sold privately, of which due notice will be given,) before the Bollingbrook Hotel, in the city of Petersburg, Virginia, at 11 o'clock, on Wednesday, the 26th day of May next, without reserve or regard to weather, that valuable body of highly improved arable and heavily timbered land, extending up the north side of James river, from the Chickahominy river, in the county of Charles City, Virginia, about 5 miles, well known under the general designation of SANDY POINT. This estate lies 32 miles below Petersburg, 45 miles below Richmond, and about 65 above Norfolk, in what is justly considered the finest and most extensive grain growing region of Virginia, and as healthy as any mid tide water. Spring and well water abundant and good. The whole tract contains 4,454 acres of unsurpassed natural quality, of which 2,150 have been thrice limed, and are now in a high and successful state of cultivation, upon the five field rotation, with more than 500 acres well set in clover. The balance chiefly in wood and timber, embracing a body of some of the best timbered land in Eastern Virginia, convenient to good navigation. Marl abounds on the river, and Stone Lime of excellent quality is 6-12 cents per bushel.

The sub divisions are as follows—

THE NECK—contains 984 acres, 551 limed, clovered, and in a high state of cultivation; 163 in wood and timber, and 244 meadow or marsh land well meadowed and reclaimable at small expense. A valuable winter Fishery belongs to this farm. BUILDINGS—A small new frame dwelling, smoke house, negro houses, stable and large barn, with stationary horse power and shelter.

LOWER TEDINGTON—contains 834 acres, 550 limed, clovered, &c., 232 principally in wood and timber, and 31 in reclaimable meadow. BUILDINGS—A new frame dwelling with 4 rooms and a passage, negro houses, a large and well arranged barn, with stationary horse power and shelter; two large stables for horses, oxen, &c., extensive hay house and spacious and well arranged buildings, for the protection of wagons, carts and all farming utensils, &c.

UPPER TEDINGTON—the Family Residence. Contains 775 acres, 532 limed, clovered, &c., 229 principally in wood and timber, and 14 in reclaimable meadow. BUILDINGS—a commodious wooden dwelling, large two storied kitchen and laundry, ice house, new and spacious carriage house and stable, servants' houses, &c., &c. Also, a new Barn, part wood and part brick, with 4 floors 80 by 35 feet, and a wing 30 by 50 feet, with bone, plaster, saw and grist mills. In the barn there is all the necessary machinery for threshing and winnowing wheat, shelling and grinding corn and sawing timber, all effectually driven by a 16 horse power stationary engine in complete order and condition. A large orchard stocked with every variety of fruit, in successful bearing is attached to this farm.

UPPER QUARTER—contains 836 acres, 546 limed, clovered, &c., 290 principally in wood and timber. BUILDINGS—A small frame dwelling, kitchen, laundry, smoke house, negro houses, barn with stationary horse power and shelter and stable.

Each of the above four farms has a river front, with landings, at which wharves can be erected cheaply and conveniently if desired. To "Upper Tedington," within 100 feet of the barn, belongs a new, commodious and substantial wharf, at which the largest size vessels lie, steamers, sea and river, pass twice a day, frequently oftener, plying between Petersburg, Richmond, Norfolk, Baltimore, Philadelphia and New York.

In addition to the above described four farms and timber and wood land thereto attached, are the following valuable timber and wood lots eligibly situated, convenient to navigation, which will make farms as desirable and productive as those above described:

No. 1, containing 215 acres; No. 2, 193 acres; No. 3, 214 acres; No. 4, 223 acres; and No. 5, 147 acres.

Mr. Nicol, residing at Sandy Point, will be prepared to show the property in my absence, and a particular and thorough examination is invited at any time previous to the day of sale. Accurate plats of each sub-division have been prepared and are ready for inspection. Possession of the timbered lands given immediately after the sale; of the farms at the end of the year, with the privilege previously, of fallowing and seeding wheat.

TERMS:—For the farms, one-fifth cash, the balance in five equal annual instalments from the 1st January, 1853. For the timbered lands, one-third cash, and the balance in three equal annual instalments from day of sale. The credit payments to bear interest and to be secured by deeds and bonds, or notes with approved securities or endorsers.

ROB'T B. BOLLING.

Petersburg, Virginia, February, 1852.

WM. PANNILL & SONS, Anctrs.

ALDERNEY AND IMPROVED SHORT HORN CATTLE.

THREE thorough bred Alderney BULLS, from nine to eleven months old, raised from the choicest imported stock. Also, two thorough bred young short horn Bulls, ten months old, raised on the farm of Mr. J. P. Remington, near Philadelphia, and for sale by AARON CLEMENT, Agent for the purchase and sale of improved stock, Cedar street, above 9th street, Philadelphia.

February 2d, 1852.

FRUIT AND ORNAMENTAL TREES FOR SALE.

50,000 Peach Trees of one and two years growth, from the bud; 40,000 Apples; 5,000 Cherries; 5,000 Dwarf Pears, each containing all the most esteemed varieties, and of large size. Also, Quinces, Plums, Nectarines, Apricots, Almonds, Grapes, Raspberries, Gooseberries, Currants, Strawberries, &c., &c. 50,000 Silver and Ash-leaved Maple Seedlings of one years growth; 50,000 Apple Seedlings. The above will be sold on the most reasonable terms. Persons residing at the south and west should send their orders early. Catalogues with prices annexed will be sent to all applicants.

ISAAC PULLEN,

February, 1852—2 mos.) Highstown, Mercer Co. N. Jersey.

COTTAGE FURNITURE.

WARWICK & Co., are constantly manufacturing new and appropriate designs of enamelled, painted and Cottage Furniture, of warranted materials and workmanship. Suits of Chamber Furniture consisting of DRESSING BUREAU, BEDSTEAD, WASH-STAND, TOILET TABLE, and FOUR CANE SEAT CHAIRS, as low as \$30 per suit, and upward to \$100, gotten up in the most superb style.

Those who are about furnishing hotels, cottages, or city, residences, should call and see this style of furniture, which for cheapness, durability and elegance is far preferable to the old heavy kinds of mahogany, &c.

Orders from all parts of the country promptly attended to and carefully packed.

WARWICK & CO.,

Warerooms, No. 4 and 6, South Seventh st., between Chestnut & Market streets, Philadelphia.

Sept.-om

HENRY A. DREER'S
SEED AND HORTICULTURAL WAREHOUSE,

No. 59, Chestnut st., near 3d, Philadelphia.

Constantly on hand a large and well selected assortment of Garden, Field, Grass and Garden Seeds, Fruit Trees, Grape Vines, Roses, &c.

Horticultural Implements in great variety. Catalogues forwarded on post paid application.

(sep.-4t)

Life Insurance for Horses, &c.

THE American Live Stock Insurance Company, (Stockholders individually Liable) for the Insurance of Horses, Mules, Prize Bulls, Sheep, Cattle, &c., against Fire, Water, Accidents and Disease. Also, upon Stock driven to Eastern markets, or transported South.

JOHN H. FRICK.

General Agent for Pennsylvania, Philadelphia.

REFERENCES:

Wood, Abbott & Co., }
Truitt, Brother & Co., } Philadelphia.

Coates & Brown, }
Agents:

JOHN ZIMMERMAN, Lancaster Pa.

CHARLES F. FRICK, Reading, Pa.

SAMUEL H. TAYLOR, Mauch Chunk, Pa.

Dr. JOHN G. SCOVEN, Veterinary Surgeon,
Examiner for Lancaster County.

May, 1851.)

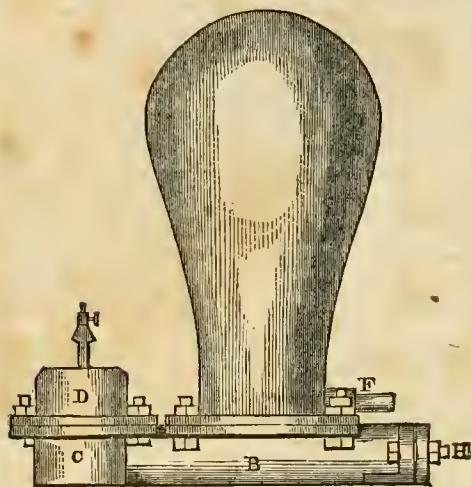
STRAWBERRY PLANTS.

THE subscriber offers for sale 4000 young and thrifty Strawberry plants at low prices. This and the following month being the proper time to form new beds to bear fruit the following year.

J. F. HEINTSH.

Aug. 1, 1851.

No. 13, East King st., North side.



A. an air chamber—B. body of ram—C. valve chambers—D. valve—F. coupling for delivery pipe—H. coupling for driving pipe.

J. B. CHICHESTER,

NO. 23, SOUTH EIGHTH STREET, PHILADELPHIA,
AGENT for Birkinbine's Patent Improved Hydraulic Ram,
Force Pumps, Street Stops, Fire Plugs, and Hydraulic Machinery
in general.

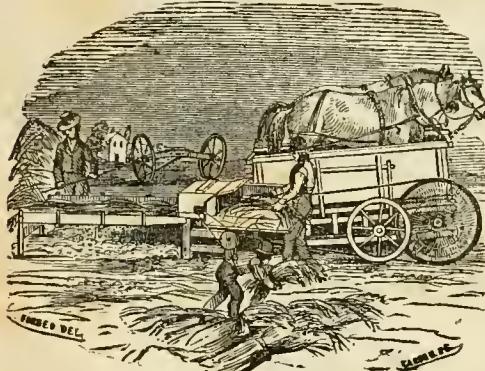
The superiority of these Rams over all others is the great amount of water thrown to that wasted, the large size they can be constructed, the durability of them, as well as the small amount of attention and repairs they require—many running at present for 4 and 5 years, without any repair. At the present time there are in the United States, Cuba, Mexico and South America, about 2000 in successful operation.

The town of Naples in the State of New York is supplied with water by one of these Rams, throwing 20,000 gallons a day. Many more could be mentioned if space would permit.

Persons wishing Rams sent to them by measuring the amount of water their brook or spring affords, per minute, the head and fall they can procure, the elevation to be overcome, and distance to be conveyed, can have the proper Ram and Pipe sent them, with directions for putting up.

The expense, in most cases, is smaller than a well and pump.—Letters post-paid, will meet with prompt attention. When desired an experienced person will be sent to put them at a small additional expense. Lead and Iron Pipe for sale. These Rams are wanted in every respect.

(Jan. 1852. r-



WHEELER'S PATENT

Pennsylvania State Agricultural Society's First Premium Railway Chain Horse Power and Over-shot Thresher and Separator.

THESE Machines were awarded the first Premium (of \$10,) and a Diploma at the Pennsylvania State Agricultural Exhibition, in competition with many others, and they have also received the first (or a monied) Premium at all the County Fairs wherever they have been exhibited for Premium in the State of Pennsylvania, and numerous premiums in other States. To show the public that these Machines are none of the bumbugs of the age,

I WILL PAY ONE HUNDRED DOLLARS

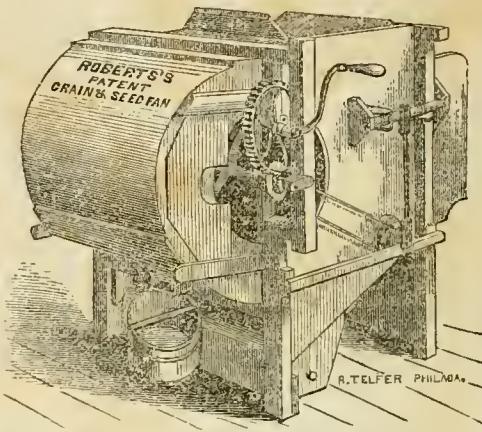
as a premium to any person who can produce a superior Horse

Power and Threshing Machine for general purposes and to do more work with the same amount of labor, in any given time.

For more detailed explanation, see *Farm Journal* of August, 1851, or address the subscriber, at Harrisburg.

Harrisburg, February, 1852.

M. H. STEEVER.
2mos



IMPORTANT TO FARMERS!

JESSE ROBERT'S PATENT UNITED STATES
GRAIN AND SEED FAN.

TO WHICH WAS AWARDED THE
FIRST PREMIUM

At the Pennsylvania Agricultural Fair, after a trial the fairness of which could not be disputed. These Fans, the inventor confidently asserts, are the only ones now in use entirely adequate to the wants of the farmer. The object of the inventor was not directed alone, to the purpose of cleaning grain, but of cleaning it and saving at the same time the farmer the trouble of gathering it from the floor, thus not only avoiding labor, but keeping the grain from the dirt on the floor. In addition to this, these Fans, possess greater advantages than those constructed upon the old plan.—These advantages are as follows:

First. The arrangement is such, that a quick shake can be obtained by turning slowly, thus securing when desired, a less quantity of small seeds.

Second. When necessary a slow shake can be secured, by rapid turning. This is of immense advantage, as it adapts the fan, to the cleaning of all kinds of seeds.

Third. A new method of adjusting the riddles and screws. This gives the operator the advantage of placing them in any position best adapted to accomplish the purposes of a grain Fan. Every riddle and screen has a separate adjustment, so that each one can be fixed at any angle without the necessity of taking them out.

Fourth. The grain, instead of falling on the floor, as is usually the case, is discharged, by means of a small trough, into the half bushel, or other measure that may be placed under it. By this arrangement the grain is all measured, by the time it is cleaned, thus saving not only labor, but time, and consequently expense, as well as keeping the grain from contact with the dust and dirt on floor. For this reason, the fan, can be put in operation anywhere, with as little trouble as the common fans can be used in a barn floor.

Fifth. The simplicity of their constructions renders them less liable to get out of repair than other mills.

For the above reasons, we confidently recommend our Fans to public patronage. Privileges to manufacture will be granted on reasonable terms. Satisfactory information can be promptly had by addressing *post paid*, the subscriber at Norristown, Montgomery co., Pa.

Norristown, December 1, 1851.

JESSE ROBERTS.

9-tf

Seed and Agricultural Warehouse.

No. 29. Market Street, Phila.

WHERE the subscriber has opened an extensive assortment of GRASS AND GARDEN SEEDS, of his own raising, or recent importation, and warranted to be as represented.

He is, also, manufacturing all the most approved Agricultural Implements, among which he would call the attention of Farmers to his new article of Plow, of his own invention, called Cast-Steel, Extending Point, Self-Sharpening, Surface and Subsoil Plows, which for durability and ease of draft is yet unequalled.

The great advantages these Plows possess over all others, are their peculiar construction and the substitution of Cast-Steel in the place of Cast-Iron, which only wants to be seen to be appreciated; all of which will be sold on the most reasonable prices by

May, 1851.

C. B. ROGERS.

FRUIT & ORNAMENTAL TREES, &c.

The subscribers solicit the attention of Nurserymen, Orchardists and Amateurs, to their present large and fine stock of Nursery Articles:

STANDARD FRUIT TREES, for Orchards; thrifty, well grown, and handsome, of all the best varieties.

DWARF TREES, for Gardens. The largest stock in the country, and the most complete.

DWARF PEAR TREES. Our collection consists of well known leading varieties, and numbers more than 150,000 saleable trees—The superiority of these, being grown in the country, over imported trees is well known to every intelligent cultivator. Nothing, in fact, in this country, can equal our collection of Pear Trees—They can be had from one to four years growth, some of which are now covered with fruit.

4 DWARF APPLE TREES. We cultivate in large quantities the best and handsomest varieties of apples on Doucain and Paradise stocks for Dwarfs and Pyramids, and can furnish them in large quantities, from one to two years growth.

DWARF CHERRY TREES. All the leading varieties are cultivated on Mahaleb stocks, extensively. We can furnish by the hundred and thousand, from one to two years growth.

CHERRY Currant, the largest variety known. Upwards of 1,000 plants on hand.

ENGLISH GOOSEBERRIES, all the best sorts.

LARGE FRUITED MONTHLY RASPBERRY, that gives a crop of fine fruit in the autumn.

STRAWBERRIES, all the best sorts.

ORNAMENTAL SHADE TREES, of good size, for streets, parks, &c., large and well grown.

CHOICE TREES AND SHRUBS, for lawns and pleasure grounds, including all the finest, new and rare articles recently introduced.

HARDY EVERGREEN TREES. Norway Spruce and Balsam Fir, of small size, in large quantities; and a moderate supply of large ones, besides nearly fifty new and rare Evergreens, including Deodar Cedar, Cedar of Lebanon, Chile Pine, Cryptomeria or Japan Cedar, Hinu'ayan Spruce, &c., &c.

ROSES, PEONIES, a large and complete collection, including the finest varieties.

PHLOXES. A collection of upwards of sixty varieties, including thirty new varieties imported last spring.

DAHLIAS. Upwards of 100 select varieties, including the finest English prize flowers of 1849 and 1850.

The following Catalogues, giving full information as regards terms, prices, &c., will be sent gratis to all who apply by post paid letters or at the office.

1st, a General Descriptive Catalogue.

2d, a Wholesale Catalogue.

3d, a Catalogue of Green House Plants.

4th, a Special Catalogue of Dahlias and Bedding Plants, for 1851.

ELLWANGER & BARRY,

Mount Hope and Garden & Nurseries,

Rochester, N. Y.

Sept. 1851.

THE MODEL ARCHITECT.

A series of original designs for Cottages, Villas, Suburban Residences, Country Churches, School-Houses, &c., &c., by Samuel Sloan, A.R.A.

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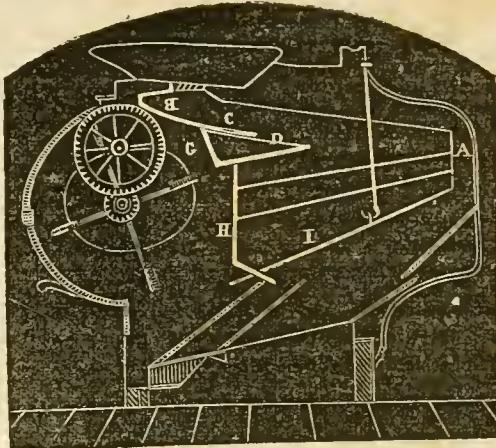
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